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Monthly, \$1.00 a Year

Lower Rates on Bees Will Save Thousands

By Kenneth Hawkins
Wisconsin

BUYERS of package bees and nuclei will save thousands of dollars during 1932 because of a reduction in express rates of one-third from previous charges, effective approximately May 16 next. Still more will be saved in 1933, when a full season of package shipping will move at the lower rates, since by May 16 this year no doubt more than 50 per cent of 1932 purchases will have moved.

This reduction in express rates is the result of several years' agitation which crystallized at the meeting of the Southern States Beekeeping Conference at Montgomery, Alabama, during February, 1931. Previous efforts having been unsuccessful in reducing rates, a meeting was called by the then president, E. G. Le Stourgeon, preceding the regular sessions and attended by some forty southern shippers. Here definite pledges were made by state chairmen named by Mr. Le Stourgeon to aid in securing the vast amount of data necessary to the filing of such a petition. Also, through popular subscription, funds were raised to send a shipper representative to New York City as an expert witness in the case in the person of Mr. W. E. Harrell, of Alabama.

About this time it developed that California shippers had been working along similar lines, and when they heard of the southern movement, after writing Mr. Le Stourgeon, they were referred to the writer, since he had volunteered to draw up the brief and appear before the rate committee of the Railway Express Agency, Inc., in New York City for the shippers at the expense of the G. B. Lewis Company, Watertown, Wisconsin. It was decided to consolidate the west coast and southern states efforts, with Mr. Hawkins to act for both and Mr. J. E. Wing, of California, to act as expert witness at the New York hearing for the west coast shippers.

Forms were supplied the southern

states men to assist in securing the necessary information, and it is interesting to note that over twelve hundred communications were received in order to secure the necessary data to present in New York. The information from the west coast was received in one complete file in excellent shape for immediate incorporation into the brief and was collected after a similar committee of shippers had met in California, and was compiled and completed by Mr. Frank Todd and Mr. F. H. McAlfresh, Jr., and others.

When the complete data was assembled, which had taken about ten months, an application for lower rates was filed with the express officials and a date set for hearing agreeable to all concerned. The hearing was held in the main office of the express agency in New York on October 29, 1931, and was before officials representing traffic, claims and management in the persons of Mr. R. S. Wheeler, Mr. H. M. James and Mr. J. H. Butler. The writer has had some experience in appearing before rate committees and wishes to record the fine treatment received at the hands of the express committee.

To one not familiar with this work it is difficult to detail the information required to successfully present such a petition. Comparable lower rates on other commodities have to be shown; great stress had to be laid on fewer claims due to better packaging by shippers and familiarity in handling by express agents; the certainty of increased traffic at lower rates to offset loss of revenue by the express companies if only similar volume of traffic resulted at lower rates, etc. In such cases nothing is taken for granted, and the vast amount of detailed information had to be briefed and backed by the sources of information and supported by the expert testimony of Mr. Har-

rell and Mr. Wing. Many questions not foreseen in briefing the petition had to be met on the spur of the moment and express officials convinced of the truth of the answers. If any of you have ever been an unwilling witness in a lawsuit with a good attorney questioning you and your veracity, you will realize that the hearing was no simple matter. This is no reflection upon the express officials, as they were playing with thousands of dollars of income for their agency and had to know, not guess.

Early in the winter of 1932, a letter was received from Mr. Wheeler advising that the data submitted had been checked throughout the country by their officials and found substantially correct. This portended a lower rate, which was recommended by the express officials, who, however, since the express companies are now owned by the railroads, had to submit their recommendations to the various executive railroad committees and await their approval before any announcement could be made. This delay loses many dollars for early buyers in 1932, but was the set form through which such applications have to pass according to law.

Accordingly, on March 30, approval having been received from the rail executives, the lower rate was announced, effective as soon as further legal channels could be coursed. The law requires that the revised schedule of rates must be on file at every express office in the U. S. A., with the Interstate Commerce Commission and all interested state commissions at least thirty days before the rate may become effective and used. This requirement makes it unlikely that the new low rates of first class instead of one and one-half times first class can be used before May 16, 1932.

It is impossible to list all those who assisted in this work, as so many

helped here and there that a list of helpers would fill a column. It is the hope of the writer that none will feel slighted if their name is not listed here, for the help received from all quarters was needed. However, it would be unfair, besides mention of officials previously made in this article, to omit the Southern States Field Station of the U. S. Bee Culture Laboratory at Baton Rouge, Louisiana, of which Dr. Warren Whitcomb, Jr., is in charge. The work of the laboratory in gathering and publishing data on standardization of cages for shipping bees elicited much information of great value in this application for lower rates. Likewise the work of the Department

of Agriculture of California was vital.

It has been an interesting experience to work with so large a group of beekeepers who for once were agreed upon something and all worked together so harmoniously. It is the wish of the committee that as many as will should express their thanks to the express agency for this real service to honey production by sending a letter of thanks to the traffic manager, Mr. R. S. Wheeler, Railway Express Agency, 230 Park Avenue, New York City. Let's show him we do appreciate it and will also try to show it in increased purchases of bees because of the saving, thereby increasing express traffic and revenue.

which you wish to divide, find the queen and put her, with the comb of brood and bees upon which you find her, into a new hive, which you will fill with sheets of comb foundation, and place it upon the stand of the colony, removing the latter. This hive you will put in the place of a third colony, putting the third colony in a new spot. The queen is given to the queenless colony immediately, for we do not wish the bees to recognize their queenlessness, as they might rear queen-cells and swarm with the new queen.

We have thus made one increase from two colonies, getting the brood and young bees from the first and the field bees from the other. The colony that has lost its field bees will soon have a fresh lot of them and will be about as good as before, and another division may again be taken from it after a few days.

The colony from which you have taken the brood and young bees is perhaps the more weakened of the two, but since it still has its queen, it will soon have its hive full of brood and another division may also be taken from it by and by. The "increase," or the swarm, as you may call it, is perhaps the best off of the three, for it has brood, young bees, old bees and a new queen. It may also be used, in a few days, for more increase.

Another way is to make two or three nuclei from one colony, giving each a queen and putting each in the place of a strong stock.

Another way is to shake all the bees you can from a strong colony, give them a queen and put them in the place of another stand.

In all this you must be sure that there is a honeyflow, for if there is nothing in the field the bees will be likely to fight. But if there is honey to be had, everything will go smoothly. If there is no honey, it is better not to make any divisions until the flow comes. Or if you wish to make divisions, then place them on a new spot and give them each a queen. Make sure of the queens being accepted. Usually there is no trouble in queens being accepted by the young bees if they have not been given time to ascertain the loss of their own queen.

Practical Ways to Make Increase

By C. P. Dadant

WE are all agreed that it is not advisable to make increase from natural swarming. Then what is the best method?

The first question in making increase in a rational way is that of queens. We must have good queens ready for our increase if we do not wish our bees to lose time. Making divisions and letting the queenless half rear its own queen is a waste, besides giving us a possibility of poor queens.

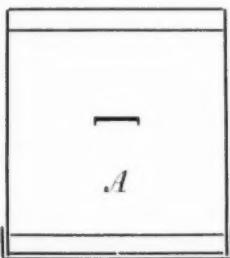
Thus the reader will realize that he must either buy his queens from some reliable breeder or rear them himself. If he is so located that he can do his own queen-rearing, it will be so much better than relying upon someone who may not be as careful as he ought to be. We must not only rear our queens from good stock, with plenty of nurse bees, so that the larvae will not be short of pap, but we must also have plenty of good drones in the vicinity. Many people do not realize how far queens and drones will travel to mate. If there are common bees or hybrids within three or four miles, there is a possibility of the queens mispairing with another race. When I say this I presuppose that we have Italian bees and wish to keep them as pure as

possible. There are other good races, but personally I do not think it is worth while to try to rear them. Both the Carniolan and the Caucasian bees resemble the common bees much more than do the Italian bees, and so it is more difficult to recognize mispairing of those races. As they are not superior to the Italians, I would recommend the Italians to everyone.

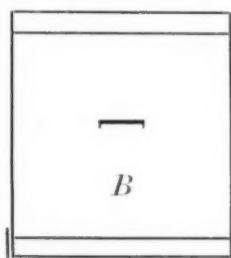
If you wish to rear good queens and plenty of them, get the "Practical Queen-Rearing" of Pellett, or the "Scientific Queen-Rearing" of Doolittle, or both. Read them carefully, then rear your queens.

Now, to give you instructions about "Increase," we will take it for granted that you have either reared a sufficient number of queens or have bought them from a reliable breeder, or perhaps from two breeders, in order to have less in-and-in breeding. When your queens are at hand is the proper time to make increase.

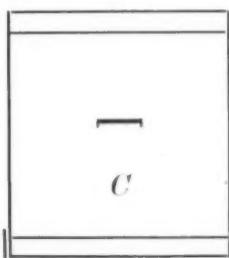
There are dozens of ways to go at this, and something depends upon the season, the strength of the colonies, the honey harvest, and so on. If your colonies are strong and you are in no hurry, you may follow the plan which I like better than any other—that is to make one increase from two colonies. Open the hive



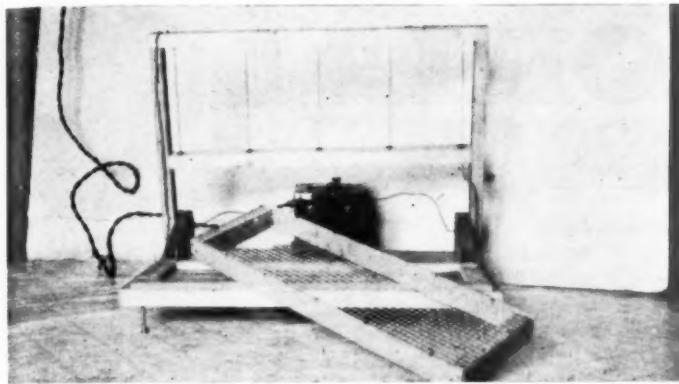
Find the queen of A, and leave her here with the comb of brood and bees on which she was found. Fill the hive in which she is placed with combs.



Put colony A here, without its queen but with all its bees and brood.



Remove colony B to this new place, C. This makes one increase from two colonies.



Cutting honey from the comb to wrap in different ways is an interesting development in honey production. Here Mr. Rhapsstock shows a honey cutter that will make a smooth job of cutting. The picture and diagrams explain themselves.

How to Cut Honey from the Comb

By Carl G. Rhapsstock
Wisconsin

I PRODUCE honey in shallow frames to cut and wrap in cellophane. A knife is a slow and messy method of cutting the honey into nice square pieces, so I have adapted an outfit used in restaurants to cut butter into small pats. By heating the wires which do the cutting, with low voltage from a toy transformer, I can cut a whole comb into four nice squares in one operation. The cost of the entire outfit, transformer and all, is around three dollars.

Cut a board 12x18 inches for the base. Half way along the back (either 18-inch side) fasten a piece, 3x6 inches, with two long screws. This piece should have two corners cut at an angle. This forms a rest for the transformer.

Next, rip a piece of $\frac{3}{8}$ -inch stock into two $\frac{3}{8}$ -inch strips 17 inches

long, and two 1-inch strips $4\frac{1}{2}$ inches long. These strips are fastened flat to the base to form a rectangle close to the front edge. Bevel the inside edges of each strip. A drain hole is bored in the center of the rectangle and grooves cut in the base to help drain the honey which will leak from the cut combs.

Two pieces, $5\frac{1}{2}$ inches long, shaped like the piece labeled "support" in the drawing, are fastened in an upright position along the ends of the base and back of the rectangle.

Next, from $\frac{3}{8}$ -inch stock rip two strips 1 inch wide and $11\frac{1}{2}$ inches long, and one strip 1 inch wide and $18\frac{1}{2}$ inches long, and one strip 1 inch wide and $17\frac{1}{2}$ inches long. Fasten the longest one to the ends of the two short pieces, and the $17\frac{1}{2}$ -inch strip fasten between the end pieces, $6\frac{1}{2}$ inches from the long strip. Five holes, $3/16$ of an inch in diameter, are now bored through each of the longer strips 4 inches apart, with the outside holes $\frac{1}{2}$ inch from the ends. Cut pieces of sheet steel about 5 inches long and $\frac{1}{8}$ inch wide and pierce the ends with small holes 4 inches apart. Place these over the holes in this cutter frame.

Now thread steel or microhm wire through these holes, fastening one end to a screw and the other end to

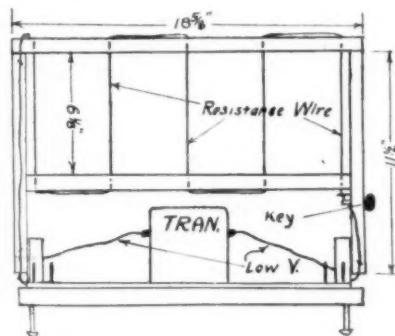
a banjo peg, or key, so you can keep the wire tight. No. 22 wire will do nicely. From the ends of the wire, leads of copper wire are taken down to connect with the low voltage terminals of the transformer.

This cutter frame is mounted on the supports with two screws, so the frame may be swung up and down over the rectangle. Centers should be $1\frac{1}{2}$ inches above the base.

Make several frames or holders on which to place the combs of honey. These are of strips 1 inch wide with ends of $\frac{3}{8}$ -inch stock, $4\frac{1}{4}$ inches long, and the sides of $\frac{3}{8}$ -inch stock, $16\frac{1}{4}$ inches long. The tops are covered with No. 4 mesh hardware cloth. Drive four headless nails into the strips of the rectangle on the base of the cutter to form a guide for setting the honey holders in place.

Put four long screws into the corners of the base to hold it up. Place the whole device on a shallow metal tray to catch the drippings. Connect up the transformer and adjust the voltage until the resistance wire becomes too hot to touch, but not red hot.

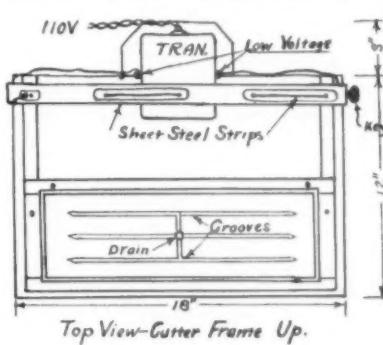
Then place a frame of honey on the wire cloth of one of the movable holders and cut the honey loose from the frame with a sharp knife. Place the holder on the rectangle of the cutter and bring the cutter down slowly through the honey, making four equal pieces. Set it aside to drain and cut until all the holders are full. Let the honey drain, then wrap.



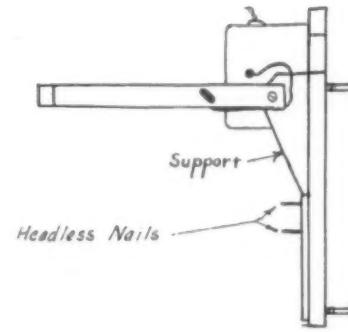
Front View-Cutter Frame Up.

long, and two 1-inch strips $4\frac{1}{2}$ inches long. These strips are fastened flat to the base to form a rectangle close to the front edge. Bevel the inside edges of each strip. A drain hole is bored in the center of the rectangle and grooves cut in the base to help drain the honey which will leak from the cut combs.

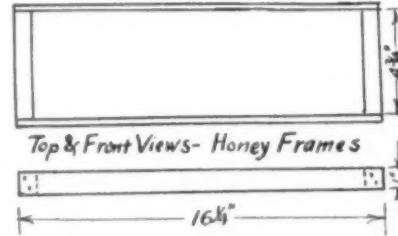
Two pieces, $5\frac{1}{2}$ inches long, shaped like the piece labeled "support" in the drawing, are fastened in an upright position along the ends of the base and back of the rectangle.



Top View-Cutter Frame Up.



Side View-Cutter Frame Up



Top & Front Views- Honey Frames



Drifting Bees

The first article in our April number is worthy of consideration perhaps to a greater extent than most beekeepers realize.

The great cause of bees drifting is the similar appearance of their hives to one another and the exact manner in which most beekeepers arrange them in straight rows.

On this matter of similarity between hives, Mr. Langstroth wrote (see paragraph 504 of our revised Langstroth book, "The Honeybee"):

"If a traveler should be carried, in a dark night, to a hotel in a strange city, and on rising in the morning should find the streets filled with buildings precisely like it, he would be able to return to his proper place only by previously ascertaining its number, or by counting the houses between it and the corner. Such a faculty, however, was not given to the bee; for who in a state of nature ever saw a dozen or more hollow trees, or other places frequented by bees, standing close together, precisely alike in shape and color, with their entrances all facing the same way and at exactly the same height from the ground?"

In these errors made by bees the greatest loss is the loss of young queens, which, after mating, come home to the wrong hive, for they are often killed and their hive is thus left queenless.

Our old, experienced beekeepers take good care that each hive should have a special appearance, should be located far enough away from the next that the bees may not mistake the one for the other. This drifting of bees is the cause of so many people believing that a colony is impure because its bees are not all from its own mother.

The practical beekeeper takes care that his hives be separated so the bees may not make mistakes.

Honeydew

The "Bee World" for March contains a very interesting article from Professor A. N. Briuchanenko, of Moscow, Russia, on the production of honeydew from the leaves of trees. The professor made some very extensive experiments upon this subject and he finds that the exudation is produced from trees and shrubs at a very high temperature. He mentions temperatures as high as 50° C. or 120° F. Such temperatures are rarely seen in the United States.

There is no doubt of this exudation from the leaves of trees or bushes. But there is no doubt either of a production of honeydew by winged Aphids, or plant lice, and also by the wingless Aphids. The writer of this at one time noticed a sort of rain falling on trees and shrubs. By placing himself in such a position as to throw the rays of the sun upon this falling dew, he noticed clearly that it came from winged insects. This honeydew could be found indifferently upon the leaves and the stems of trees and occasionally upon dry leaves, while

there were but few wingless plant lice about. But one thing may be said of all kinds of honeydew: It is a poor substance for the sustenance of the bees, and if left in the combs for winter will surely cause many bees to die of diarrhea, by overloading their intestines.

New Outlets

New outlets are bringing increased prosperity for several agricultural commodities. Late reports indicate that tomato juice is rapidly gaining in popularity. In some localities it is served with breakfast in place of the popular orange juice. The increased acreage of tomatoes necessary to meet the new demand runs into figures of surprising extent. The demand for juice sets the gardeners to seeking varieties with the largest possible amount of moisture in their content. The varieties with heaviest flesh formerly in demand are discarded in favor of the opposite type.

Some of these days some thoughtful person will point out some new use for honey which will find an outlet for a sufficient quantity to restore prosperity to the beekeeper. What will it be?

A Huge Organization

Recent newspaper reports state that the present appropriation for the United States Department of Agriculture now aggregates two hundred million dollars annually. We have not verified that statement, but if true it looks like a very large sum.

Those interested in agriculture in its various branches have asked for first one service and then another until the department has grown into a colossal organization. There are hundreds of branches and there are doubtless many of these items which could be dispensed with. In a recent radio address Senator Reed of Pennsylvania said that the United States Government is now running behind at the rate of \$5,000 per minute, day and night.

It has been a popular idea that when we want anything done the Government should be asked to do the job. At every convention there has been talk of getting increased appropriations for this, that, and the other activity. We have overlooked the fact that the Government cannot give us anything. When the government does a job it never fails to send us the bill. Now we are confronted with the necessity of greatly increased taxes which every one of us must help to pay in one way or another. Many who can least afford to pay taxes are paying the most, because they have lost jobs which could no longer be supported by industries too heavily taxed.

Every item in the great appropriation for the Department of Agriculture should be carefully examined. Every possible saving should be made, and must be made if we are to regain our former measure of prosperity. Several economists have recently stated that taxes in one form or another now consume one-fourth of the national income. Some have placed it as high as 40 per cent.

Profit and Loss

A recent statement of the relative profits of sixty important lines of business for the year 1931 shows confectionery and beverages at the head of the list. Whereas agricultural implements, apparel, building materials, cotton mills, furniture, sugar and several others conducted their business at a loss, confectionery and beverages turned a substantial profit. It seems that the average person is unwilling to forego candy and soft drinks whether times be good or bad. One business which was not far behind was tobacco, which also showed a fairly prosperous year.

It is a little surprising to find that the public will pinch on clothing rather than on candy or tobacco. The fact that more than 40 per cent of the merchandising and industrial corporations conducted business at a loss last year shows how widespread is the present depression.

Honey is a food product usually regarded as a luxury. It has suffered more than candy, tobacco or soft drinks. On the other hand, it is relatively more prosperous than such farm staples as fruits, vegetables or livestock, and has fared far better than wheat, cotton or wool.

While conditions are far from rosy for the beekeeper, still we find in localities where there has been a good honey crop that the beekeepers have fared as well as any other class, and better than most. For a long term, beekeeping is a pretty safe business in localities where crops are dependable.

Let's Go

The American Bee Journal has not missed an issue for more than sixty-five years. During that time there have been several depressions. Some were very severe and some resulted in a mere slowing down of business for a few months. After each depression America has gone forward to new prosperity and a greater volume of business. There is every reason to believe that we will do the same this time.

Now that spring is at hand, we find the bees searching everywhere for new sources of nectar. After the long winter they are alert to find every available flower which furnishes pollen for the growing young. When the harvest comes they will be ready for it and the supers will be filled with honey in a surprisingly short time. Those colonies which fail to start brood rearing until the honey-flow comes will find themselves with empty supers when the flow is over. It is the colony with the hive overflowing with bees which will get the big crop of honey, and likewise it is the man who is ready with a good outfit who will prosper in any line of business. The foundations for some of our largest fortunes were laid in times of depression. When business revived the one who was ready got the cream.

Bee Supplies Are Down

There is an occasional complaint that bee supplies have not come down in price along with honey. In order to ascertain the relative deflation, we have examined a bee supply catalog for the year 1921 and another for the current year for the same manufacturer. We find the following items of interest:

In 1921, one hundred Hoffman self-spacing frames are listed at \$11.20, while the present price is \$4.60. In the 1921 catalog one thousand sections are listed at \$22.00, while they sell for \$10.50 now. Medium brood

foundation in 1921 sold for 90 cents per pound in 25-pound boxes, while the price is only 55 cents per pound now. A one-story, ten-frame hive with metal cover sold then for \$5.60, while the present price is \$2.95, or slightly more than half the former figure. A two-frame reversible extractor sold at \$39.00 then and \$22.00 now.

An examination of the market pages of the bee magazines in 1921 showed honey selling at about 8 to 10 cents per pound in car lots. It is selling below that figure now, but has suffered no greater decline than the price of supplies. It is true that a few items of limited sale still remain at the same price, but these are usually items that failed to advance in price during the boom period.

Cost of Production

The studies in the cost of production of agricultural products are rather futile. The man with 100-egg hens cannot produce eggs in competition with men who have hens laying 200 or 300 eggs per year. The man who produces twenty bushels of corn per acre is not in the class with the man who gets sixty. Since no two farms are alike and every individual hen or cow gives returns different from others in the same flock or herd, it is impossible to set up any figure as the approximate cost of producing a gallon of milk or a dozen eggs.

In our April issue Merritt Cook stated that he can produce honey at a profit at 5 cents per pound. He has an unusual location. There are but few beekeepers who can do as well in getting the cost of production down. There are, however, but few beekeepers who could not materially reduce their present costs by giving attention to the details of their business. Better combs, better bees and more equipment would make possible to increase the returns from bees. To produce a super of honey in a poor season may cost more than double what it costs the same beekeeper in a good season. In the years when yields are large, even though prices are low, we may expect to secure good profits. In the poor seasons, even though prices are high, little profit is possible.

Prices are determined by supply and demand and have little relation to cost of production. The man who eliminates unnecessary items of expense adds that much to his net return.

Each beekeeper should determine as nearly as possible his own cost of production and look for ways and means of reducing it.

Retrenchment

On page 192 Mr. Bear protests because the Governor of his state has not filled the office of bee inspector. We beekeepers feel that our problems are worthy of special consideration. To us they are of first importance, but every one of us is anxious to see lower taxation, and that can only come by cutting down on expenditures. No matter what activity it is proposed to curtail, those benefited will protest.

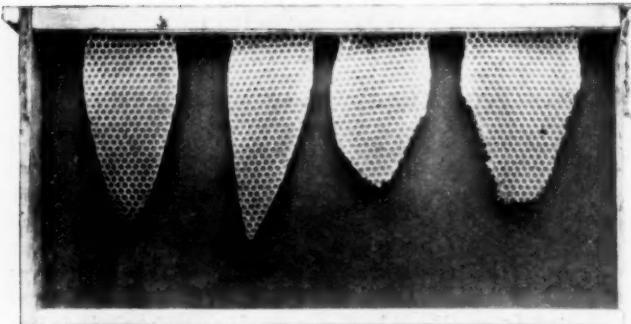
We cannot hope for a return of prosperity until there is a reduction in taxes. Let us take our share of the cuts along with others. Every possible public activity should be dispensed with in times like these. We feel that to curtail inspection will result in an increase in disease, but it is impossible for the public to continue to bear the present burden of taxes. It will be better for all concerned to have every possible reduction made until such time as improvement comes. When that time arrives we can expect that pressing problems will again receive public attention. In the meantime dispensing with some things which we now regard as essential may result in finding other and better ways of meeting our problems.

Securing Choice Queens for Home Use

By E. L. Sechrist, Associate Apiculturist
Bureau of Entomology, United States Department of Agriculture



Part I — How to Secure the Queen-Cells.



THE beekeeper who desires to rear some choice queens for himself or a neighbor can do so with but little trouble and equipment by using the Miller method. This may not be the best method of rearing queens on a commercial scale, but there is no better plan for the honey producer. No artificial cell cups are used, nor is grafting of larvae required.

The Miller Method

In an empty brood frame fasten several starters of foundation which are about two inches wide at the top and taper down to a point within an inch or two of the bottom bar. Put this frame in the hive containing the best queen. To avoid having drone-comb built in it, take out of the hive, either for a few days or permanently, all but two frames of brood and put the frame containing starters between these two. In a few days or a week this frame will be half filled with virgin comb on which bees readily build queen-cells. It will contain young brood with an outer margin of eggs. Trim away with a sharp knife all the outer margin of comb which contains eggs except a very few eggs next to the youngest brood. These outer rows of eggs will hatch almost at once and will be just right for queen-rearing.

This is very simple. Any beekeeper can do it the first time he tries, and it is all that is necessary to take the place of artificial cell cups. Now put this prepared frame into the middle of a very strong colony from which the queen has been removed, and the bees will build as good cells as can be obtained with any kind of artificial cells.

Some apiarists prefer to take all the brood away from the queenless colony when they take the queen away, and place the queen, if she is valuable, with a frame or two of brood with plenty of adhering bees, in an empty hive while the cell-building is in progress.

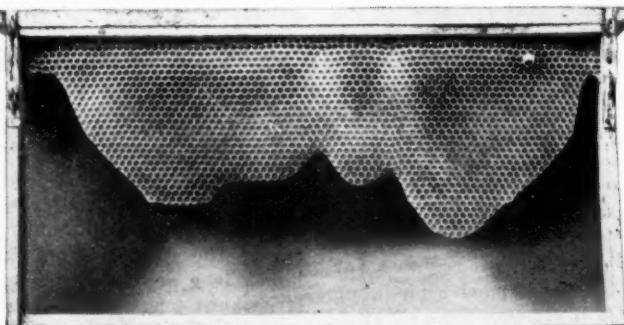
When the colony has been without queen or brood for an hour or two, it will be anxious to rear queen-

cells on the prepared frame which is given it. The soft new comb with abundant room at the edge for cells suits the bees so well that they will start few, if any, cells on their own comb. In about ten days the sealed cells are ready to be cut out and used wherever desired.

The Hopkins Method of Getting Queen-Cells

Some producers of honey on a large scale use another method of securing queen-cells which is also very simple, though it involves destroying a new comb.

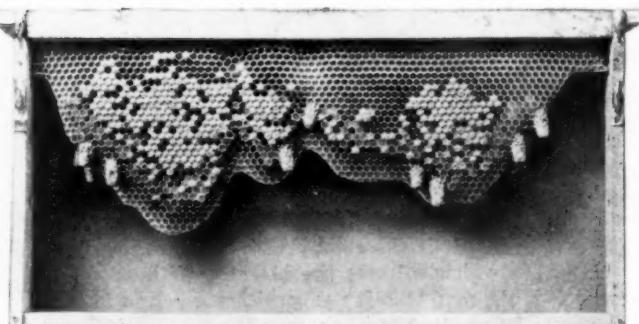
Remove a frame of brood from the colony containing the breeding queen and in its place insert a new comb not previously used for brood rearing. If the queen lays in it at once, at the end of four days this



Top: Frame with starters which the bees have begun to draw out. Two starters have had the edges trimmed off.

Center: Frame with the comb built out and filled with eggs and larvae.

Bottom: Frame with the cells built and ready to use.



What of the Queen?

Doolittle said she is the "soul of the colony" and no one has ever told the truth more nicely. For many large producers the home raising of queens is hard to do for lack of time. It is also hard for the smaller beekeeper in many cases. Yet to know something about how queens are reared is a part of the education of every true beekeeper. In two well developed articles, Mr. Sechrist gives simple ways for home use. The second article will appear in June.

comb will be filled with eggs and hatching larvae. If she does not make use of the new comb at once, wait until four days after she does begin to lay in it. When in proper condition for use nearly all the cells should be filled with eggs and some newly hatched larvae. As many as one hundred cells at one time have been secured by this method. If but twenty or thirty cells are wanted, the comb need not be full of eggs and larvae.

The best side of this comb is to be used for cell-building. It is prepared by alternately destroying two rows of worker-cells across the frame (some prefer to destroy three) and leaving one, beginning at the top of the frame and continuing to the bottom. To destroy these rows of cells, cut down through the comb to the midrib, and then, with a chisel or similar tool, cut off or scrape the unwanted cells down to the midrib. To prevent queen-cells from being built in bunches, making it impossible to separate them without injury, destroy two cells and leave one in each row that has been left. This may be done by inserting a match in the cells to be destroyed, using a turning motion. After these cells have been destroyed, we have what are practically individual worker cells about one-half inch apart over the entire surface of the comb, each containing an egg or newly hatched larva.

Place this comb flatwise over the frames of the strong, broodless, queenless colony which has been prepared as for use in the Miller plan. If the colony has been made queenless but not broodless, allow it to remain queenless for about seven days before giving the prepared frame, so that no larvae in the hive will be young enough for the bees to use in starting queen-cells. If the colony has been made both queenless and broodless, the prepared frame may be given after one or two hours. Three or four frames are enough to have in the hive at this time, one or two of them being almost empty comb and one containing unsealed honey and fresh pollen, so that the bees may have at hand sufficient food for use in preparing royal jelly for the young queens.

An empty comb-honey super on top of the hive body makes it possible to place the frame flatwise and support it one and one-half or two inches above the brood frames, either by strips laid on top of the frames or by fastening it into the comb-honey super, so that between the prepared frame and the brood frames there may be room for large queen-cells as well as clustering space for the bees. It is advisable to cover the prepared comb with a quilt or cloth to hold the heat of the cluster. When the cells are ready, they can be cut

out with enough comb attached to support them firmly in place between two frames, as described before.

The Identity of That "New Louse" of Bees

When I saw the picture in the January number of the American Bee Journal of a new bee louse, I recognized it as the first larval instar of a beetle of the family *Meloidae* (blister beetles). There is no doubt in my mind, after reading Dr. Dragneff's original description of *Pediculus apis* in "La Gazette Apicole," that he was dealing with triungulins.

Meloe variegatus and other species are quite common in Europe, and they are mainly parasitic on solitary bees, but triungulins are frequently found clinging to honeybees.

In the American Bee Journal (volume 62, 1922, page 260), Wallace Park gives an account of blister beetles in relation to the honeybee. Figure 1 of his paper shows a triungulin whose cerci are broken off and the abdomen slightly ruptured, but a comparison with the drawing in your last number will show you the likeness of the two organisms. The triungulins of various species vary in size and color from a yellowish white to black, but they are similar in general appearance. They bear three claws on each tarsus, and on account of this characteristic and others should not be mistaken with strepsipterous triungulins or species of the genus *Pediculus*.

In 1930 I received about one hundred specimens of *Braula coeca*, preserved in alcohol, from Mr. Much, of Vienna. Among these I found a triungulin which apparently was brushed from a bee with bee lice. I remember finding them many times on bees back in Austria.

Erwin C. Alfonsus.
Wisconsin.

Early Weather in Louisiana

After an exceptionally mild winter—mildest in sixty years, according to the weather report—March broke the record for cold. On March 13 a large part of the state was covered with ice and sleet, which, together with rain and snow, was the rule for ten days, snow being reported in New Orleans.

This means millions lost in early vegetables, strawberries, and fruit bloom. To what extent bees suffered depended on later conditions. Most sections of the state were blessed by a tremendous honeyflow last year, and honey was so cheap that much of it was never taken off the hives. The warm winter weather brought heavy consumption of stores and early brood rearing.

The cold weather in spring undoubtedly chilled some brood, set back the early plants, willows, yellow-top, and even blue vervain. The freezing of plants in full bloom ruined the honeyflow. The willow flow was damaged, and it had been heavy all over the state.

My bees threw out brood every opportunity with the temperature at freezing for days at a time. This forced the bees into a cluster and ruined weeks of brood rearing.

Jes Dalton, Louisiana.

World's Largest Candy Makers Market a Honeybar

By S. F. Haxton
Pennsylvania



Honeybar, a new confection, is on display and is selling fast in hundreds of thousands of news stands in subway, elevated and railroad stations, in cigar and candy stores, and in almost every type of outlet where nickel bar candies are distributed.

The new product is made by the Hershey Chocolate Corporation of Hershey, Pennsylvania, who have distribution in every hamlet for Hershey chocolate bars and who are duplicating this distribution with honey bars. The Hershey Corporation is recognized as the largest manufacturer in its field.

The bar advertises honey wherever it is on display, for the word "Honeybar" dominates the wrapper, both because it is in red and because it is printed as large as possible. Under the name the composition of the bar is indicated by the words, "Honey, Milk Chocolate, Almonds." The net weight is 1 1/2 ounces and the bar sells for 5 cents.

Honeybar has the real flavor of honey, easily recognized by a bee-keeper. According to news dealers, it sells readily and "repeats" because the public likes the distinctive flavor which honey gives to the confection.

W. F. R. Murrie, president of the Hershey Chocolate Corporation, was asked whether all of the sweetening element was honey or whether sugar was used also. He replied:

"In the Honeybar all of the sweetness is not honey, part being cane sugar, due to the fact that it is impossible to work into the chocolate the necessary amount of sweetness with honey alone.

"The honey that is used is bought through wholesale channels and is known as good commercial honey. Needless to say that the quantity has been large, although, as a matter of policy, we do not quote quantities."

A Queenbee for the Commercial Honey Producer

By Frank Beach
Idaho

REQUEENING requires time and labor. Selection of a gentle, prolific breeder, the grafting of cells, the care of the cell-starting and cell-finishing colony, the making of nuclei, the feeding of the bees and the introduction of the mated queen make requeening difficult of accomplishment.

Authorities tell us the best time to requeen colonies is a week or two before the close of the honeyflow. Then the supers are full of honey, the colony is full of bees, the supers are heavy to lift off and put back on. There are so many bees in the hive it is hard to find the old queen and dispose of her.

The close of the honeyflow is also the time of extracting and the honey producer is fully occupied with this work and the pressure of harvest does not allow for proper attention to requeening. While this may be the ideal time to requeen, beekeepers simply do not do it for lack of an opportunity.

It has been our custom to requeen continuously throughout the season, beginning with the first honeyflow, until the bees are put away in their winter pack, doing this as we find a colony with a failing queen, a cross one or a queenless one.

This requeening has always been a big problem. We have talked with large and small beekeepers in the West, to learn of a better way, an easier way to get fine queens into the hive.

We asked R. T. Rhees, of Ogden, Utah, who counts his colonies by the thousands, how he requeens. He replied that he did little of it, but let the bees do it themselves, mostly, making up any loss by keeping a few more colonies, feeling that the extra investment in this way is less expensive than the large amount of work required in requeening.

We also have colonies that have never been requeened, good prolific colonies, coming through the winter with a hive full of bees and supers of honey.

We have found colonies with supersEDURE cells, sealed and unsealed, with an abundance of royal jelly surrounding the larvæ, and we have put the cover on with the feeling that the bees are taking care of the matter. While the old queen does not keep up the proper strength of the hive, the new queen will take care of it without our help.

Two weeks later, if we open the hive expecting to see a young queen, we find supersEDURE cells just as we did the first time, and the old queen on the job; then we feel it is time to kill the old queen.

We have opened the hive and found the old queen with considerable brood and the hive full of bees, and on the same comb a young unclipped queen doing duty. The next time around we take special note of both queens. Yes, they're getting along fine. Perhaps the next time around we are unable to find the old queen and we go off in the shade to meditate.

Why continue all this labor of requeening when the bees can do it so well themselves? Why not do all requeening with queens raised from prolific, gentle colonies that requeen themselves? Then we will have our work lessened as the years go by and the requeening becomes automatic.

I have not seen an advertisement of a queen breeder claiming any such feature for his queens, however. For a commercial producer, it is an ideal to work to. It might reduce the demand for queens, but then it would tend to cheapen honey production.

Some queen breeders have queens to sell—beautiful, gentle queens, and they look fine, but they do not come up to what the commercial producers want. I read an advertisement claiming beautiful, gentle bees. I got one of this man's queens for a breeder. The queens raised from her produced gentle workers, but did not keep the combs full of brood, and the honey crop was not up to standard.

Later he advertised that the queens were being selected for productivity as well as gentleness and beauty. Dr. Miller tells us that he selected for prolificness alone and got results, but also a lot of cross bees. If to these qualities of gentleness and prolificness we add the ability to requeen themselves before the old queen fails to keep her colony strong, we will more nearly approach what the commercial beekeeper wants as a queen.

A Statesman's Economy

By Hiram H. Bear
West Virginia

THE political mountain has moaned and brought forth a mouse in West Virginia. The honorable secretary of agriculture has announced a saving. He will not fill the position of state honeybee inspector, a vacancy caused by the death of T. K. Massie.

The writer agrees there is much need of reduction in state expense, but economy should begin with those who draw salaries for not working. The state inspector receives payment only when he is working. For instance, there was added to the state expense a man to check up on un-

employment, and he hired six clerks. Perhaps he did not get the postoffice he wanted.

Beekeeping in West Virginia has always been backward. What little progress there was made was due to the earnest efforts of Mr. Massie. Years ago there was much high grade honey produced in West Virginia, but by the slipshod methods of putting bees in gums and letting them alone until fall, when they were robbed to the last ounce. Black bees predominated and beekeepers who were enterprising enough to make advances were few and far between.

One of these was Mr. Massie, who gave his time and services free. He labored almost without pay for years to improve honey production in West Virginia. To increase the average knowledge of beekeeping in the state was a labor of love with him.

Several times efforts have been made to get our State Legislature to pass a law to protect beekeepers, but it has always been too busy looking after the interests of absentee coal mine owners to take time to pass legislation for the farmers. The railroads had no trouble getting their bills through. There was no question of expense for the state when it was decided to transfer the coal mine guards' pay from the mine owner to the taxpayer.

It is probable that in no state in the Union does the farmer receive so little for his money as in West Virginia. Our honey has always brought good prices, running from 25 to 40 cents a pound, with quality that had no equal when gathered from the woods, and persons visiting the state often commented favorably on it. But now the sawmill man has done his worst. The timber is largely gone and there has been little effort at reforestation. All the timber is taken off and none put back.

There never was before so much need of a good, scientific bee instructor as today, just when this economy plan goes into effect. I wish someone would explain why it is that legislative efforts are always for the one who is taking out the things that nature stored away and exhausting our natural resources without any idea of replacement, and why he pays no heed to the man who produces and does not destroy. In every walk in life it would seem that this condition holds true.

Don't gather the idea from this that all beekeepers in West Virginia are box-hive and gum-log beekeepers. There are still too many of them, however. Those who do practice scientific beekeeping do not have time to educate their less fortunate neighbors in the art of doing all things well.

A Year With a Colony on Scales

By Jes Dalton
Louisiana

ON the night of October 23, 1930, I picked up a nice two-story colony of active appearing bees and moved it from an outyard, where the levee was forcing my whole layout to move from the river bank, and carried the colony up and set it on a scale hive. I had previously scouted around because I did not want an excessive heavy colony nor a weak one.

It balanced at exactly 112 pounds. There was a good flow of honey on and weather good. I moved it approximately one-half mile and the next day it had lost a half pound of bees. From October 25 to the 29th it lost a pound by ounces. Then it rained a day. After that it gained slightly.

By the first week in November it had begun to rain almost continually. There were no more gains. Apparently the moving had drifted perhaps a pound and a half of field bees back to the old location after they returned from flight to the fields.

By the end of December the colony was down to 102 pounds. On January 8 the bees of the colony were carrying pollen heavily. By the end of January it balanced at 97 pounds.

The last day of February they weighed 90 pounds, and on the 14th of March they balanced at the lowest point for the winter, 84 pounds. The loss between November 30, when it stood at 109 pounds, and March 14 was exactly 25 pounds.

This would indicate that the consumption of stores from November 30 to March 14 was 25 pounds. This was the period when the colony did not gain, and it would seem to indicate a smaller winter consumption than one is ordinarily led to believe.

Many points of interest developed. During the spring and early summer, how tremendous was the cost of one good, cool rain. On the morning of April 26 the scale stood at 109 (a super had been added previously). On April 27, the following day, it rained, and on the morning of the 29th the scale was only 108, lacking a pound of being up where it was three days before. It had lost all this time instead of gaining. This can be verified time and again all through the season.

The monthly gains running from the last part of March for this colony run as follows: March 14, gross weight 84 pounds (one full-depth super drawn combs added, weight 23 pounds); March 31, gross weight 108 pounds; April 30, gross weight 214 pounds (one full-depth super foundation, weight 16 pounds); May 31, gross weight 257 pounds (one full-depth super foundation, weight

16 pounds); June 30, gross weight 297 pounds; July 31, gross weight 345 pounds; August 31, gross weight 371 pounds (one full-depth super foundation, weight 16 pounds); September 30, gross weight 389 pounds (but had been up to 394—cold rain shrank it to 389); November 10, gross weight 382 pounds, and on that date I extracted 184 pounds of honey. I had a call for bottled honey just then and sold the whole lot for about a dollar a gallon, the purchaser furnishing the bottles. This amounted to about \$14.00 cash from the colony in return for the capital invested and labor of running the colony and taking off and bottling the honey.

There was some honey left in the cappings unrecovered and I gave away a couple of bottles, quart fruit jars, to resell, which I understood sold for \$2.00 per gallon minus the cost of jars and handling.

In addition to this, the colony drew out three full sets of full-depth extracting combs from foundation.



A colony on scales is a valuable barometer of what is going on in the apiary.

In extracting, I could not extract heavily because the honey, which was mostly from Vervain, had candied in the comb so as to make clean extracting impossible. Also, no combs were extracted that had only a small amount of honey in them. All wet combs were returned to the colony and the hive balanced at 196 pounds, 96 of which was in the supers, leaving a net of 102 pounds on November 10. In the previous November the gross weight was 104. The two years were about equal.

There were colonies in the yard which I think did better than this one. Some were divided and each division stored a surplus. It was a good season. The fall flow was a failure, as the figures show, but in many sections of Louisiana honey came more freely in the fall than at any other time.

I have it in mind to run the same colony on scales and keep strict account of time consumed in working them and furnishing them drawn combs and possibly taking off the honey.

To a beekeeper who loves bees and the study of them, and who likes comparison, if he has never worked a colony on scales he simply does not know what he has missed. They tell a story entirely different from his comprehension, and a useful one.

For instance, if he is crowded to put on supers with foundation, as most of us are occasionally, the scale hive begins to show a loss with weather conditions apparently just as they have been, he will know that his rush is over, for if this colony is falling off he does not need to worry about conditions for the others.

It further showed by comparison with other colonies operated on scales in this locality that there was not much difference among colonies, at least this one year. When one was getting a good flow, the other was, even ten miles away, and when one out of the bunch was getting nothing or losing, the others were not gaining.

This applied to Mr. Stevenson, of Westwego, and Mr. Bohne, at Luling, about ten miles away, one up the river and one down, showing a similarity for at least twenty miles along the river, while at Baton Rouge, one hundred miles up, the flows and scales showed entirely different reading, no gains or losses in midsummer while we were getting good gains, and heavy gains in the fall when we were not getting anything at the same time.

Beware the Mice

A silk bee veil stored in an empty hive makes a tempting nest for mice. I found this out to my sorrow.

S. F. Haxton, Pennsylvania.



R. E. Foster, Florida's popular State Apiarist

FLORIDA is a magic word. The very name, suggesting flowers, is alluring. The thought of a place where flowers bloom and bees fly throughout the year is enticing to those of us who are accustomed to the ice and snow of a northern winter. There is no perfect country. Every state has its drawbacks, and Florida is no exception, but it does have many interesting attractions. In my various trips to Florida I have tried to become familiar with its problems and its opportunities and to understand the conditions under which the honey producer in that region operates.

Most of the commercial honey produced in the United States is from cultivated crops. In a neighborhood where a single crop is dominant the beekeeper can expect a large yield of honey of uniform quality. In Florida, most of the honey comes from wild plants, and because of the great variety of plants which yield honey there, we find a similar variation in the quality of the honey. There is probably a greater variety of honey in surplus quantity in Florida than in any other state, excepting California. As would be expected, the quality varies all the way from the finest table honey to that suitable only for use in baking or other manufacturing.

The beekeeper going to Florida from a northern state has to learn his practice all over again, since conditions are so different. With the bees active all the year, there is no problem of protecting them from a long period of intense cold. Instead, there is a very real problem of conserving the bees during times when no honey is to be had from the field. Although they do have some very heavy honeyflows, when large yields are harvested, it is not so easy to build up the colonies to such strength as is common in the North at the start of a good flow. With brood rearing continuing for the greater part of the year, it is difficult to at-

With the Bees in Florida

In a Mild Climate It Is Easier to Get By, But Requires More Skill to Reach Large Success.

By Frank C. Pellett



Bees on a platform in a tupelo swamp in Florida

tain maximum strength at just the right time. Much larger consumption of stores is necessary in a mild climate than is the case where the activities of the bees are concentrated into a short and intense season. To be frank, it requires more expert management to be successful in a mild climate like Florida than in the northern states.

On the other hand, increase is so rapid and there is something for the bees so much of the time, that slack beekeepers can get along and secure some honey much easier than farther north. Perhaps these statements may seem to be in conflict, but it certainly appears true that it is easier to get by in Florida than anywhere else I



J. B. Nordman, of DeLand, is both a fruit grower and a beekeeper and sells his products at a roadside stand

know and, at the same time, requires greater skill to secure large success.

Big crops come at uncertain intervals; but when they do come, the man who has his colonies ready gets big dividends on his investment. Mr. Foster told me of one small apiary of forty colonies that harvested an average of 500 pounds of surplus honey per hive from black mangrove. Mangrove begins blooming in June and, in favorable seasons, yields for six to eight weeks. Some seasons the crop is a failure, while in others the beekeeper gets enough to make up for the poor seasons. This tree is very sensitive to weather conditions and does not yield for several years following a freeze. Several beekeepers called my attention to the fact that, growing as it does along the shore of the ocean, the tree accumulates a coating of salt from the spray. In dry weather this salt repels the bees and they desert the flowers until it rains. Following a shower the bees visit the flowers freely and gather an abundant harvest. The honey is light in color and mild in flavor and of a high quality. In seasons of heavy yields the beekeepers find real prosperity in mangrove locations.

In the citrus belt of central Florida there is much good bee pasture, but comparatively few beekeepers are expert enough to get good crops from the orange groves. The reason is because of the early blooming of the trees while the bees are still weak. A few beekeepers do get good crops from orange and they usually leave a liberal supply of honey from the previous season on the hives. With an abundant supply of honey and the entrances reduced to avoid chilling of the brood, the bees build up much earlier. In my visit to the apiaries of House & Haynes at Dunedin, Mr. Haynes called my attention to the fact that he leaves the fall honey on the hives until time for the oranges to bloom. He removes what is left just in time to avoid having it mixed with the fine orange honey. In this manner he is able to get a liberal portion of the fall honey converted into early bees and they, in turn, gather enough orange honey to make the venture profitable. Dr. Horton, of Winter Haven, has secured as much as 365 pounds of surplus from a single colony, 175 of which came from orange. The biggest crops, however, are not secured from orange, but from mangrove, as already stated.

In the orange districts the beekeepers are finding a new source of winter honey in *Crotalaria*, which is used as a cover crop in the citrus groves. There are several species, but *Crotalaria striata* yields considerable honey which comes in winter.

I had but little time in the tupelo region on my latest trip. R. E. Fos-

ter, the popular state apiarist, had arranged a series of meetings and it looked like a very good opportunity to get acquainted with Florida conditions in company with one who is familiar with every section. When Foster took sick and was unable to go, it complicated things for me, but still I did learn something. In some respects the tupelo region is the most interesting beekeeping section. The tupelo grows in deep swamps and the apiaries are usually placed on high platforms to keep them safely above water. The tupelo blooms early and it takes good beekeeping to make the most of the flow. There are some very good bee men in the tupelo areas and one might very well spend some time among them.

Many men complained that the best gallberry and palmetto locations have been ruined by the frequent fires that run through the woods. Some have sold many of their bees and turned their attention to other things because of it.

An expert beekeeper can make increase at an incredible rate in the favorable parts of Florida. I was told of one beekeeper who started with eleven colonies in March. By September he had increased them to 186 and had raised most of the queens himself. Under such conditions it is surprising that there are so few engaged in the business of raising queens and shipping live bees. I asked the reason many times in Florida and nobody seemed to have a very satisfactory answer. In some neighborhoods the mosquito hawks, which are often called dragon flies or snake feeders, are so common as to catch many of the young queens when they are out on their mating flight. In such places queen-rearing would be unsatisfactory, but it would seem that parts of Florida would be especially well adapted to this business.

The large number of winter visitors offer a special market for orange honey put up in fancy packages. They buy palmetto and other honey as well, but prefer the orange, probably because of the name. roadside stands where citrus fruits are offered are numerous, but there would seem to be room for many more stands to sell honey. J. B. Nordman, of Deland, is a beekeeper who also has a fine citrus grove. He sells both fruit and honey at such a stand and moves a substantial amount of both at good retail prices. I found a number of beekeepers who are also fruit growers, and the combination seems quite satisfactory. E. L. Walrath, of Arcadia, has a beautiful grove of about sixty acres of the finest varieties of citrus. Some time ago he began agitating the use of honey to sweeten grape fruit. The idea seems to be taking on and now

one hears honey suggested for this use quite frequently.

In a mild climate the waxmoth is active throughout the year and is a more serious pest than in regions where the cold weather stops its breeding during the winter months. Florida beekeepers must keep a careful watch of weak colonies or the combs will soon be destroyed. Strong colonies readily repel the moths, but in every apiary there are always queenless colonies or those which for one reason or another become weak. The losses from moths in neglected apiaries thus are quite serious.

Give Me Good Old Leather-Colored Italians

By Carl B. Hillman
New York

I like to read other people's ideas in the Journal. I have been interested in the discussion about the different races of bees. I produce comb and extracted honey here in New York, and I find that my Italian bees start out earlier in the day than either Carniolans or Caucasians and work till it is so dark I wonder how they find their way home, let alone finding their own hive.

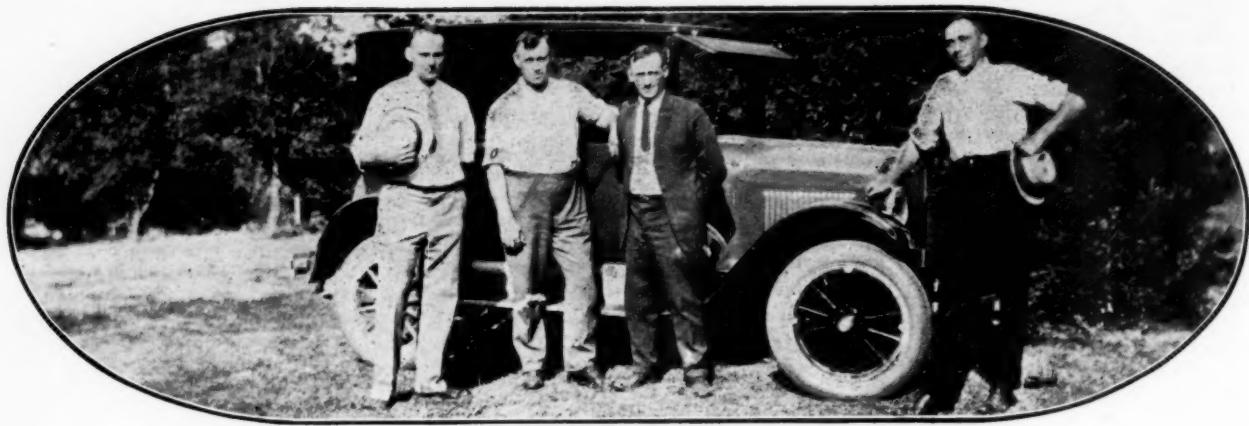
When it comes to taking off supers, the Italians here are ahead in pounds. On the week of the Fourth of July, 1930, I took off 127 pounds from some of my Italians, when the Carniolans and Caucasians were not yet ready for the second super.

I can show you every year just as nicely capped sections of honey as you would like to see from my Italians, and I will place it against any race of bees that ever flopped a wing. I have extracted honey produced fifteen years ago, and, although it is darker, the good old clover flavor is right there.

On windy, cool days in April and May, my Italians come home with big loads of pollen across a big flat about a mile, through the strong, cold wind, flying three feet from the ground to make it. At the same time Caucasians and Carniolans in the same apiary did not fly out at all.

I have also worked with my Italians day after day without a sting, unless they were pinched or bruised, and I use as little smoke as possible, frequently not using it at all. Italian queens are much easier to find and swarming easier to control. Some strains may be poor, but the Italian which I have is a good all-round bee.

It only took me a year to satisfy myself. I gave all three races the same chance and at the end of the year I pinched off all the Carniolans and Caucasians and shall keep the Italians. Up here in New York the good old-fashioned, leather-colored Italians are the ones that will stand the climate best. Next to them I place the golden Italians.



From left to right: C. S. Engle, Frandsen, J. D. Beals and Schenkel, at Anthon, Iowa, before the move.
Beals is now at Dwight, North Dakota

Starting Over Again

By C. S. Engle
North Dakota

ALL beekeepers have most likely at one time or another wished that it was possible for them to start over again in keeping bees and producing honey. Of course, we would get off to a better start than we first made. Practically each one of us would look around for the best honey producing locality, where bees store immense crops of delicious white honey, where there is no bee disease and practically no wintering problem; in other words, we would look for a "beekeepers' paradise." Then we would select a different type of hive—a hive that bees could be kept in with less attention from their owner and a hive that would hold sufficient stores for winter and spring. From our past experience with the different races and strains of bees we would know which one to choose for our new venture.

Some years ago the late J. E. Crane, of Middlebury, Vermont, mentioned in an article of his in one of

the bee journals that a young man had asked him what kind of a hive he would use if he was able to start in the bee business anew. Mr. Crane,

who had tried about all of the various types of hives in his many years of experience, replied that a good beekeeper could produce good



The Dahlstrom yard, established in 1929 with Modified Dadant hives



The Crosset yard, established in 1928. With new hives and package bees, it was a real task.

crops with bees in any style of hive he might have. He said that each beekeeper should select the hive and equipment best suited to his needs.

I Experiment

The first bees that I bought were in eight-frame hives and boxes. At that time the ten-frame hive was becoming popular, and after trying both the eight- and ten-frame hives for several seasons I decided in favor of the ten-frame hive. It was a happy moment in my life when a neighbor beekeeper offered to trade his ten-frame hives for my eight-frame hives. In time I began to wonder why a larger brood chamber than the ten-frame brood chamber would not be more desirable.

Seventeen years after I had secured my first bees I had an oppor-

tunity to start anew when I sold my entire business. Some of the bee journals had been featuring articles which described a "beekeepers' paradise" in the valley of the Red River of the North. Several years before I disposed of my business I made a trip through this so-called "paradise" and was impressed with the possibilities for any experienced beekeeper who would be able to start out with new equipment in such a locality. However, I did not get as rosy a conception of the country as did writers of some of the articles in the bee magazines and literature put out by the railroads, but did conclude that it was as good bee territory as where I was then located. There was more unoccupied territory and I was told that bee disease was unknown. Before I had the opportunity to move into the Red River Valley and establish any apiaries, conditions underwent some important changes. Quite a few commercial honey producers moved in with large outfits.

While prospecting in the "beekeepers' paradise" I discovered that nearly every beekeeper used a different type of hive, but practically all of the equipment was the very best and neatly arranged in the apiaries. A number of beginners were using the eight-frame hive, while the ten-frame was in general use. Some men used single brood chambers and others were using two bodies for brood chambers, in order that their colonies might have room enough for brood rearing and winter stores.

A Two-Queen System

I also saw hives holding twelve Langstroth frames and a large apiary of Modified Dadant hives. Several beekeepers were using what they called a two-queen system hive, a hive that held fourteen Langstroth frames and a division board, or fifteen frames without the division board. (This is the Lawrence two-queen system and hive described in our February number.—Ed.) This type of hive was receiving a great deal of attention and some producers reported enormous crops from them. A man who had about one hundred colonies of bees in ten-frame hives told me that a neighbor beekeeper had one hundred of the two-queen system hives and described how this man, who was an expert honey producer, managed to secure such crops.

Two three-pound packages of bees with queens were put into each hive in the early spring, one package on each side of the division board. The bees were fed heavily on sugar syrup as long as they would take it, in order that they might draw out the foundation and to stimulate brood rearing. Several weeks later queenless packages of bees were added to each hive, then a week or so later

another lot of queenless bees was added to each colony, so that by the time the main honeyflow started there were two rousing colonies in each of the double hives. A queen excluder was placed over the center of the brood chamber and both colonies stored in the same tier of supers. I was informed by several men that these hives demanded too much attention and that it was almost impossible to keep two queens on the job in each one during the whole season. It was also claimed that the average per colony was no more than for single colony hives. However, several beekeepers were very enthusiastic over the possibilities of them.

My Mind Was Made Up

There was no question regarding the type of hive I would adopt when I moved, for, after trying the eight-frame, ten-frame, Jumbo, and the Modified Dadant hive, I felt certain that the latter would best meet my requirements in such a locality. Up to this time I had done practically all of the extracting at houses at each apiary. The full-depth, ten-frame body filled with honey was more than I cared to boost onto and off of a truck, and a hired man usually handled such supers so rough that many frames and combs were damaged. Nor did I care for the regular shallow extracting super, which holds about thirty-five pounds of honey. I now planned to do all of the extracting at a central plant and wanted a super that would not be too heavy and would stand up best under trucking conditions. The Modified Dadant super holds approximately forty-five pounds of honey and weighs about fifty-five pounds gross, which is not too heavy for easy handling. The super frames are just deep enough to stand ordinary handling, too. By using split bottom bar frames in the supers, I could use a reinforced foundation and dispense with the wiring of super frames, which would otherwise be a great task in assembling for several thousand supers. While the Modified Dadant brood chamber is large, it is none too large for a prolific queen, and I prefer to carry such a hive into and out of the cellar than the two-story, ten-frame hive that is in common use.

Two years before I was able to move into the new territory I bought one hundred Modified Dadant hives and put package bees into them and left them in charge of an amateur beekeeper. While these bees did not produce a crop that would compare favorably with crops reported in the Red River Valley, they produced what I considered a fair crop after taking into consideration that they did not have a drawn comb to begin with.

A Big Job Ahead

When I finally did get moved I found that I had a tremendous task ahead of me before I could start keeping bees, for there was a big carload of bee supplies to be nailed up and prepared for the bees before I could care for the first truckload of packages. I also had a great deal to do in trying to establish a new home in a new land, but with the assistance of several capable helpers the supplies were always ready about the time a load of bees arrived.

Some beekeepers may be interested in how we tried to take advantage of every short cut possible when assembling supplies. We first nailed up all of the cypress bottom boards and dipped each one into a vat of thick gas tar. The tar was kept hot with a small fire in a hole in the ground under the vat. The bottoms were then placed on end, over a piece of sheet iron, so that surplus tar drained off and ran back into the vat, and then they were scattered about on the ground and allowed to dry until nailed onto the bottom of the brood chambers. The metal roof covers were next nailed up, with a piece of heavy building paper inserted between the metal and wood, and the bottom edges and sides of the wood rims were painted. The inner covers were nailed and stacked up in piles and the edges painted. We then stacked the ends and sides of the brood chambers and supers up in piles and painted the edges before nailing and painting them. While this work was progressing several other persons were nailing and wiring the brood frames and nailing the super frames. Foundation was not fitted into the frames until the bees needed it.

Package bees that were hived on foundation did not do well that season, and I did not get my packages until late, so I secured an extremely short crop of honey. After harvesting the crop the bees had to be prepared for winter and several cellars built. That was a very rainy summer and fall; possibly the excessive amount of rain retarded the honey crop. When winter arrived the ground was saturated with moisture and even though there was very little rain the following season there was a fair crop of honey. Then the two following seasons were extremely dry and the crops of honey the shortest on record, so local beekeepers are unusually anxious for another old-time crop here in the valley of the Red River of the North.

I Made No Mistake

After using the Modified Dadant hive on so large a scale for the past few years, I am not at all sorry that I selected it when I made a new start in keeping bees. I do not consider it too large—in fact I wonder why

it was not made square; then it would take twelve deep frames instead of eleven and would hold more feed for spring and winter use. It is not too large nor heavy for a man of average size and strength to pick up and carry into the cellar or load onto a truck.

I supposed that it would be necessary to use queen excluders on all hives, but discovered that they were not needed. Some queens do go up in the super to lay when it is first given the colony, but the bees soon crowd her down with honey. When I go to take off supers of honey I use honey boards or bee escapes and find very few supers with any brood in them. It is a pleasure to handle the supers, and I find that combs stand up much better in the radial type extractor than do the Langstroth depth combs, although my super frames are not wired. The extractor is set to run at such a high rate of speed that it takes only seven to ten minutes to extract forty-five combs of warm honey. This would not be possible unless the combs were drawn on reinforced foundation. The frames would have to be wired for ordinary foundation. By using only ten combs in the supers, the combs are built out thick enough to make uncapping easy.

More Bees with the Same Labor

I am not attempting to force the large brood chamber on anyone, but I am certain that it now takes me much less time to care for the same number of colonies than when I used Langstroth depth hives. There are a number of beekeepers who tell me that they have had to come to the same conclusion, after using a number of the Modified Dadant hives. Then there are quite a few who are using ten-frame Langstroth brood chambers and supers containing nine Modified Dadant extracting frames.

If space permitted I could go into detailed description of each step taken in getting established in the new territory. However, I will say that the year I left Iowa the outfit that I had just sold produced a fine crop of honey, but since then that section has had no better crops than this. Then I also ran into some American foulbrood the first season I was here, so this locality is not entirely free of disease. While the winters are severe, the spring is the most trying season of the year, so far as the bees are concerned. On several occasions I have been asked if I did not make a very serious mistake when I made the change, but up to this time I have not decided whether I jumped out of the frying pan into the fire or not, and I took several looks before I jumped, too.

Rearing Extra Good Queens

By Alfred H. Pering
Florida

ON page 229 of the American Bee Journal, issue of May, 1931, Mr. E. S. Miller, of Indiana, asks the question, "Would you like to rear some extra good queens?" And then he goes on to tell the method of procedure.

I would like to ask Mr. Miller some questions and also relate some of my experiences. I do not wish to be overcritical, but I believe if my views and experiments are noted by those who may not happen to know "bee behavior" pretty thoroughly it will save them some losses and disappointments.

Mr. Miller says: "A few days before the opening of the honeyflow, place the brood above a queen excluder." I want to ask, does Mr. Miller place the raised brood immediately next to the lower brood chamber? Or does he place this brood higher up? In other words, does he use a second story, or half story between the brood and the lowest brood chamber?

Quite a number of years ago, while attending a beekeeping short course held at Purdue University, Lafayette, Indiana, Mr. G. S. Demuth told us in his discourse on swarm control to place all the brood in the second story, leaving the queen below.

Having lost some queens left below without any trace of brood at all, I could not resist the impulse to interrupt the speaker and insist if he was quite sure that it was the proper thing to leave the queen below the excluder without brood entirely. I even arose (in class) and pointed to his charts and hive illustrations which he was using to make clear his instructions. His reply was so decided that, returning home, I again tried it. After losing five queens (and the colonies too, almost) each succeeding year for five years, making twenty-five trials, I gave it up and continued leaving the queen upon the frame upon which I would find her, regardless of how much or how little brood was in it, together with the bees on it; leave this frame below and all was well.

It seems the queen, when left broodless, spends her time in a useless effort to pass the excluder, and in a very few cases I have found her dead, fast in the wires. Once, after two days following this manipulation, I found a queen still alive, fast between the wires, no eggs below. In fact, not one out of these twenty-five queens lost in this way had any of them done any laying below.

After a few years, reviewing my experience and seeing statements again in the bee literature, I thought to attempt to find the cause of my

failures. Finally I tried this: Shake plenty of young or nurse bees off the brood into the chamber below the excluder. Either shake these bees on top of the frames or in front of the hive, and be sure you give the queen left below enough of these young bees. I met with success in that way.

In a few instances I have lain a drawn, old brood comb, free of brood in any stage, flat on top of the lower brood chamber frames and shaken the queen and her attendant bees directly onto this comb and then quickly placed this frame in its place below.

I say I have been successful in a few such cases. I do not like to shake a laying queen off her comb. She is too tender and liable to injury. I prefer to shake the bees from another comb onto the side of the comb laid flat, then lift the queen with a spoon (a spoon that has been prepared for lifting queens by cutting a slot just large enough to nicely surround the queen in the bowl of the spoon); lift the queen over among the shaken bees, then shake the bees off the frame from which the queen was taken and put the shaken bees and queen in place in the chamber below. In this way the queen is surrounded by the bees that were in her immediate vicinity and she does not make a fruitless effort to get back to the main body of the brood.

I regard it as safer, more convenient, quicker and just as effective just to leave below the frame upon which the queen is found and remove all else. It is better than any other manipulation I have so far tried.

Another question: Does Mr. Miller get as quick and satisfactory results in the number of acceptances of grafted queen-cells when these cells are placed in the second story, rather than in a third, even though only a shallow super is used as the second story?

In my own experience I have had bees fail to start queen-cells in the second story at all, especially if the colony had apparently not yet reached the swarming stage, and honey was coming in very freely. It seemed the bees were intent on honey gathering, and the combs placed above the excluder were filled with honey as fast as the bees emerged. In these instances a small number of grafted queen-cells would be accepted, while on the other hand, when all the brood was placed in a third story, they would, in every instance that I now recollect, immediately begin building queen-cells of their own, and in many cases I had satisfactory results if

grafted cells were given the day following the raising of all the brood to the third story. Your second story may be only a half story if you so wish.

Mr. Miller gives directions for creating a queenless, broodless colony to be used as a queen-rearing colony. Why do that? Can Mr. Miller not rear good queens in the third story of a good strong queenright colony? Why divide their forces? I would fear getting too many old bees by the method he outlines. I consider that one can maintain plenty of young nurse bees in the third story by elevating sealed or just emerging brood from below the queen excluder, each time a new batch of grafted cells are given. The queen-cells started on combs must, of course, be looked after if you happen to raise young enough larvae from which the bees attempt to rear a queen.

Mr. Miller says: "If desired, the brood chamber containing the queen may be returned after the grafted cells are capped." I suppose this reuniting is done by the newspaper method and the reunited colony is now on the new stand. Is it?

Mr. Miller also states that all larval food should go toward feeding the grafted cells, and not be distributed among other larvae. Isn't that expecting too much of these bees? Or isn't that rather overdoing? In my humble opinion, if the bees are plentiful and fully equipped and have a reasonably limited amount of other larvae in all stages, I would expect better results than if you create an abnormal or very unnatural condition.

I do not claim to be an authority, but I can't agree to Mr. Miller's statement that one cannot expect to rear good queens (no, he says **the best queens**) if the bees have to feed worker larvae at the same time. Why, then, is it a fact, or at least it is so often claimed, that the best queens are reared under the swarming impulse?

I do not wish to appear to be too strongly set in my ideas of queen-rearing. My experience is limited, but I think "the best queens" are those reared under the most natural conditions.

Chilled Propolis Easy to Remove

If sections of early comb honey are propolized heavily, as they were in one apiary in 1931, the easiest way to clean them is to put them in the refrigerator for an hour or two, until the propolis is chilled, when it will come off as readily as in winter. An electric refrigerator is fine for this purpose.

S. F. Haxton, Pennsylvania.



A Study in Pink and White

Apple blossoms, pink and white,
Broidering the orchard trees,
Fill me with the dear delight
Of the Spring's sweet ministries;
Evening clouds of pink and white,
Glorifying western skies,
Are a soul-inspiring sight
Often unto human eyes.

Shells on sea-sands, pink and white,
Have enchanting mystery—
For they hold through life's long flight
Murmurs of the mighty sea!
Babes with cheeks of pink and white
Mirror all the charms that dwell
In an apple blossom bright,
In a sunset or a shell!

Lida Keck-Wiggins.

DID you ever think how many times in the pre-radio days folks would make use of the expression, "Right out of the air"? Little then did anybody dream how full the air is everywhere of all kinds of facts, fiction, music, conversation, to be heard just for the proper kind of broadcasting and tuning in.

Honey Lady often finds when tuning in on life generally that the air is just full of invaluable information suitable for the Little Blue Kitchen Department. The subject to which it is dedicated is not only infinitely "sweet," but infinitely resourceful. Therefore, again and again some little idea coming either literally or figuratively "out of the air" leads to some new and valuable discovery.

Honey Lady, like the rest of the real radio listeners-in, is often selfish enough not to care to hear the commercial broadcasts, just wanting to cull the flowers of poesy, drama, music, and, of course, the latest news about the Lindbergh baby, or whether it will be a nice day tomorrow in view of new spring tugs!

But, not so long ago, Honey Lady caught the tail-end of a little talk being broadcasted by a packing house, and heard the announcer say: "Select a medium sized ham; remove the rind; bake in honey." That was all—he was gone—but that was enough to remind Honey Lady of a delicious piece de resistance once enjoyed at a friend's dinner table—ham, glorified to the nth degree!

Therefore and at ONCE Honey Lady's meat merchant was given an

order, namely: "Bring me a nice slice of ham, and cut it two and one-half inches thick." He asked again, thinking the thickness too much, and was told again two and a half inches.

When the meat came, this is how it was treated, with delightful results: The prepared-mustard jar was got out, also a mixing bowl, and the honey jar taken off its shelf. Then to one-half glass (jelly glass size) of the mustard three-fourths of a cup of extracted honey was added and thoroughly mixed. Then, with a wide knife, Honey Lady spread the mixture on both sides of the ham and placed it in the roaster, with just enough water to barely cover the top. The meat was left in a medium oven for two hours, and the result was utterly satisfactory when sliced down either hot or cold. When Honey Lady obtained the recipe originally for preparing ham for the meat dish on a dinner menu, she was advised to mix the mustard with brown sugar, but the honey blend proved so much more delectable that it gives ye editor real pleasure to pass this on to Blue Kitchen readers.

With this dinner sweet potatoes candied with honey and some sort of a fruit salad make a good combination. Each hostess, however, will be her own menu maker.

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In these days, when everybody must conserve every crumb or scrap of left-over food, it is good to know how others do it. Not long ago Honey Lady was lunching alone and hadn't remembered to get in anything for a salad. Now, if ever, however, are "salad days," so she scoured the ice box for the "makin's" of an individual salad. Well, what do you think she found? Just a head of cabbage, three stalks of celery and a glass containing some half-granulated honey. "Well," said Honey Lady, "this is a nice hody-do! Nevertheless, I'm going to try out something." So she stripped off three leaves from the cabbage head and arranged them on a salad plate as

(Please turn page)

one does the cupped leaves of head lettuce. Then she washed and diced the celery and filled the cabbage cup with it. Then she poured the honey over it. And, if you'll believe it, there wasn't a scrap left after Honey Lady sampled it. Nor was it a salad that was hard to look at! Diced apples could be added to the celery if desired. This is just a hint, but too good a one not to pass along.

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Somebody asked a famous apiarist lately why a wedding journey or the first four weeks of married life are called a honeymoon, and this is the surprising but most significant reply: "Because centuries ago it was the custom for newlyweds to serve honey to all guests in their home for a month after marriage." Well, since honeymoons are still decidedly in vogue, why not revive the custom that gave them their name? Especially in the spring time!

Honeymooners or anybody else with guests couldn't do them a bigger favor, sanitarily speaking, than to give them plentiful supplies of honey in their rations. Nothing known is a better blood clarifier or body renovator, and as it is a predigested food even guests with the most delicate "tummys" could eat heartily and be "happy ever after."

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Delicious deep-dish rhubarb pie—i. e., pie baked in a deep tin or Guernsey dish, and having only a top crust, if sweetened with honey, is a 100 per cent spring-tonic dish, and delicious to the last drop. A pie like that was served Honey Lady in one of the most exclusive restaurants in a great city lately—and was it good? Yum! yum! Try it and see.

— o —

Now that it's almost strawberry time, don't forget some day to crush the portion you are going to serve for a meal, then mix with honey and set away to chill, and when you serve you'll be rewarded by being asked, "Mumsy, what makes the berries taste so delightfully different today?"

— o —

If more folks would emulate the bee—i. e., spend part of their time exploring life's flowers for the sweets therein and then the remainder of their days storing away those sweets for future use—there wouldn't be so many private or national scraps. It's only when folks forget how sweet life is that they want to take it from others or risk their own lives engaging in warfare. That doesn't mean always on battlefields, marching in uniforms with banners flying and bands playing; many people kill themselves and others by private hating—fighting folks with their thoughts. Ever think of that? Well, that's Honey Lady's broadcast for you. Are you listenin'?

The Caucasian Argument

By Richard D. Barclay
New Jersey

I HAD been aware of the existence of Caucasian bees for many years, but remained entirely indifferent to them until the spring of 1928. In March of that year I accompanied Mr. Ray Hutson (then assistant entomologist in charge of bee husbandry at the New Jersey Agricultural Experiment Station) on a trip to Alabama to look into the package bee situation in the neighborhood of Montgomery. When we had completed the visits which we had planned in advance, we still had a day to spare. Mr. Hutson seemed to have learned of a Caucasian breeder in the neighborhood, and somewhat reluctantly I accompanied him to the establishment of this breeder. The day was more or less chilly and showery, but in spite of the weather we were shown how comfortably Caucasians could be manipulated.

Later in the season, after returning home, and more to please Mr. Hutson than to satisfy myself, I agreed to try a dozen of these Caucasian queens. To make the trial a little more extensive, before mid-season I had requeened an entire small yard of about twenty colonies with this Caucasian stock. I still felt at the end of that season that I was laboring in the interests of science rather than with any stock which might be of particular personal benefit. Without giving these Caucasian colonies special attention, I had eighteen good colonies to go into winter that fall. Certain characteristics, which later became quite apparent, were not brought forcibly to my attention that first season.

The following winter, at our annual meeting, Mr. Hutson summarized certain apparently well known characteristics of Caucasians which I no doubt had once read and forgotten, but upon hearing his emphasis of these points I immediately became very actively interested. The principal statement which interested me was that of the reputed ability of Caucasians to fly at somewhat lower temperatures than the temperatures at which other races fly. In reviewing the other characteristics mentioned, I was surprised to find how these characteristics were almost uniformly apparent in the colonies which I had but recently prepared for winter.

My bee business is primarily that of renting bees to orchardists and others for pollination purposes. If any race of bees will fly at slightly lower temperatures, this small difference in certain seasons might decidedly affect the percentage of fruit set. Subsequent careful investigations by the New Jersey Agricultural

Experiment Station, under the direction of Mr. Hutson, and since his leaving us by Mr. Robert S. Filmer, have confirmed this tendency to fly at lower temperatures.

In 1929 I used seventy-five Caucasian queens with the idea of having enough of these to conduct orchard tests in comparison with Italians in connection with the New Jersey Agricultural Experiment Station, as mentioned. These tests have now been conducted during the bloom period of 1929, 1930, and 1931, on a larger scale each year. Details of this investigation can be learned from the annual reports of the experiment station. In 1930 I used one hundred Caucasian queens, and in 1931 I used one hundred and twenty-five. I am now wintering one hundred and sixty colonies headed by Caucasian queens out of a total of seven hundred colonies.

In considering my own experience with Caucasians and the articles which have been written for and against Caucasians and other races, I am impressed with the fact that too many writers try to keep bees for general purposes rather than for specific purposes. We are all too frequently in the position of the cattle owner who wishes both milk and meat and is forever seeking the dual-purpose animal without realizing that a large degree of perfection in two or more lines is entirely impossible. The best milk cow is naturally and admittedly not the best beef animal. The best bee for comb honey is not necessarily the best for extracted. The best bee for orchard pollination purposes may not be the best for honey production purposes and may have certain very undesirable characteristics.

The fact that one race may sting less than another may be very important to the amateur or back-yard beekeeper. To the professional, except as it may affect the labor of operation, it may be an entirely minor factor. I have felt that some of the articles pertaining to Caucasians have been written from the standpoint of the person either expecting them to be 100 per cent perfect in all particulars or from the experience of those who have given them a trial on too small a scale or for a purpose for which they are not suited. In some cases also the trials seem to have been based on the use of home-reared stock, and therefore stock which is probably more or less cross-mated.

It is also evident that there is considerable difference in the several strains of Caucasian bees which are available either direct from Russia

or from different breeders in this country. The gray Caucasian stock with little or no yellow showing seems to be much the most gentle and have less undesirable characteristics for my purposes. Other strains which I have had in very small numbers seem to be more nervous and the characteristic gentleness of the gray strain seems to be missing.

Caucasians of the proper strain undoubtedly fly at from two to five degrees lower temperature than Italians with which they have been compared. The colonies are extremely thrifty. By this I mean that there are always stores in the brood chamber for use, and no surplus is stored until the brood chamber is amply stocked for current use of the bees in their own domestic economy. The queens rather definitely fill one brood comb full of brood before expanding to the next comb. I have seen colonies in vigorous shape containing perhaps from two to three pounds of bees and three or four frames of brood, with the remaining combs in the hive entirely unoccupied by either stores, pollen or brood. This tendency is so marked that I have seen half the sections in a comb honey super occupied by Caucasians entirely filled and completed while the remaining sections were entirely untouched. A colony of Italians of similar strength and under similar circumstances would have occupied the entire super and instead of filling half the sections complete and into a marketable condition would have had the entire lot of sections partly finished. This same tendency is decidedly noticeable during the entire active season, but especially as winter approaches. With Italians we usually find some tendency to concentrate honey in the brood chambers during the fall flow, when there is any nectar available. There is even more of this tendency with Caucasians, and I believe that out of the one hundred and sixty Caucasian colonies prepared for this winter no shifting of stores was necessary to supply ample winter needs except in one or two colonies. In spite of this concentrating tendency, the queens seem to remain active and ample young bees to make a comfortable winter cluster always seem to be reared. Caucasian queens are apparently more easily introduced than Italians.

The comfort of handling these Caucasians naturally makes beekeeping more pleasant, but the special advantage of this gentleness is the fact that manipulations can be speeded up. There is on the other side the somewhat disagreeable tendency to produce an excessive amount of burr-comb. The tendency of Caucasians to close the entrances more or less with propolis is quite definite. The disadvantage of this is not in

the closing of the entrances, but in the fact that this propolis clings to the front corners of the frames and frequently extends up into the front corner of the comb within the frame. This not only spoils that corner of the comb, but makes the frame decidedly difficult to remove for examination. In a few cases the entrances are completely closed for winter except for two or three small holes.

I am convinced, from experiences so far, that for pollination purposes, where condition of colony is more important than the actual amount of honey produced for market, the Caucasians have very definite advantages.

While my purpose in discussing Caucasians is to emphasize their suitability for my particular purpose, I am also convinced from the results to date that they will actually produce more extracted honey than Italian colonies under similar circumstances. They also seem to stand more crowding without undue tendency to swarm than do Italians. This may be related to their tendency to a compactness of brood chamber and their habit of occupying additional space only as absolutely required. I have no definite data on the advantages of Caucasians as honey producers. Our experiment station expects to start some investigations along these lines during the 1932 season, as well as to continue the investigations pertaining to pollination activities.

I have noted a tendency for the bees in a Caucasian colony which are usually uniformly marked and covered with the characteristic gray hairs to show eventually in some cases more and more yellow bees. I have not practiced clipping queens, but have in most cases had Caucasian queens Duco marked. I have noticed this tendency to revert to yellow, but have made no careful counts or examinations to check my thought in this connection. I would raise the question, however, if at least in some cases Caucasian queens may not mate a second time.

My Experience With Caucasians

By B. L. Laycock
Colorado

UP until 1890, I did not take much active part in the bee yard of my father, but he said, "Son, it is time you were getting into the collar if you ever expect to be much of a beekeeper." So, as I was rather pleased that Dad's sentiments were thus, I became regular help from then on instead of a "casual fill-in."

Our bees were for the most part hybrid, though some were pretty fair-grade Italians. I commenced to note the difference in the color of the workers and also the production dif-

ference between some of the colonies; their temper differences and the tendency of some hives to be more addicted to propolization.

Naturally I felt that there should be a standardization to get rid of these objectionable features, so Dad let me try my hand in improvement on one of his yards, even to the point of sending for high bred, pure Italian queens, improved and standardized by rigid selection.

The result was so gratifying to my father that he allowed me to requeen all his bees with my most select blood lines from "my" yard, as he called it. About the time I had them all worked over to my notion he became infatuated with the stories of the enormous and almost unbelievable merits of the Cyprian bee, and nothing would do but he must get some queens and have me put them into the home yard.

We found them to be pretty good producers, but a man was a good one that could get into the yard without making contact with the sharp end of *Apis Mellifica Cypriana* (page R. O. Dodge). In fact we dubbed them the watch dogs of our home yard.

Dad soon had enough of them, but getting rid of the blood was a different ordeal, as they were incessant drone producers and, of course, had hybridized many of our own young queens, and many of our fellow beekeepers had also been "blessed" with their queens committing matrimony with our Cyprian Romeos.

We finally did rid ourselves of the strain, but to this day I am sure there are traces of this blood in parts of this county, as there is much waste land and timber land close by.

We returned, as I say, to the old faithful Italians, and I then selected a few of Dad's best colonies, bought them from him, and he sold the balance to whoever would give the money. This left me with fewer bees. On my own hook I commenced reading squibs in the various bee papers and in other sources about Carniolans and Caucasians, with the result that I finally acquired a few Caucasians both from conscientious breeders and from some who were not so conscientious.

My worst trouble seemed to be to keep away from hybridization with the old black bee. I can still readily tell that by the incessant desire in the progeny to swarm; to sting, and loaf on the job, and whenever I find a queen of that type she must take her trip to dreamland right now.

My yards now are all Caucasian and are outstripping any Italians or other variety in the neighborhood except a hybridization of the Italian and Caucasian, the first cross of which is hard to beat in any man's country for production, and sometimes for gentleness—but not always.

THE EDITOR'S ANSWERS

When stamp is enclosed, the editor will answer questions by mail. Since we have far more questions than we can print in the space available, several months sometimes elapse before answers appear.

WHAT SHARE OF THE CROP DOES LABOR EARN?

I own two apiaries of about fifty hives and there is a party who wants to operate my hives on a share basis of the honey crop. If I furnish everything but the labor or operation of the hives, what share of the honey production should I require him to give me? Remember, I furnish the land, or pasture, the hives and the bees in a first-class going condition, the honey house, the machinery and supplies—in fact everything but the labor, or operation.

LOUISIANA.

Answer—We have always considered that the caring of bees is worth about half of the product.

If anything has to be furnished in the way of supers, foundation, sections, etc., each should pay for his share of these supplies.

We have not had bees on shares for a long time, so we do not insist on the terms to be figured.

RACES OF BEES

1. Are either the Carniolans or the Caucasians considered superior to the Italians for comb honey production? If so, which race?

2. Are the Banats a desirable race? Where may one obtain queens of this race?

3. Which races are able to work common red clover? Where may queens be obtained?

ILLINOIS.

Answer—1. There are different claims on the matter of comb honey storage. The common black bees are claimed to seal their honey whiter than the Italians do. This is due to the fact that they do not fill the cell so full, so that the honey does not stick to the capping. This same claim is made for both the Carniolan and the Caucasian, but I do not know whether they have ever claimed greater production for either race.

2. The Banats are hardly to be claimed as a separate race from the common bee, since they are not separated by any mountains from the rest of the country, as are the Carniolans and the Caucasians.

3. Neither of all the races are able to get honey from red clover at all times. But there are seasons when the red clover produces so much nectar that the bees are able to get honey from it. We have seen only a few such seasons, and all the races appeared to get honey from it. As for the purchase of queens, we refer you to the advertisements.

USING MOULDY COMBS

As I have a number of combs which are mouldy but are very good combs, I hate to destroy them. Will you kindly tell me if there is any way to remove this mould so that they will be usable again?

MISSOURI.

Answer—If you will place those mouldy combs, one at a time, in the center of the brood of a strong colony, you will find them cleaned in a very short time. We have never had any trouble with mouldy combs, provided we did not give them to weak colonies.

GRAINY CELL DEPOSITS

One of my colonies of bees brought over from last year seemed somewhat weak. I examined them today. Every one of the eight frames was half full of sealed honey,

from last year. They had quite a bit of sealed brood in five or six frames and some unsealed brood which apparently had been about three-fourths grown but was dead and had a white, grainy appearance, and many of the grubs seem to have been consumed or partly consumed by something, the center part having only some white, grainy stuff sticking all around the inside of the cell. Much of it one could not tell had ever been a grub; the cells were one-third or more full of some white stuff. It did not rope, but was grainy. There were a few grubs, half grown or more, that seemed to be all right, but no quite young grubs and no eggs.

They had some unsealed honey, some cells filled, some partly filled, some just begun to be filled. This they are carrying in from fruit blooms. I would have thought this would have encouraged the queen to continue laying, but she had stopped. I examined the queen. She was a fine, normalized queen.

Kindly tell me what is wrong, and the remedy.

ILLINOIS.

Answer—The unsealed grubs that fill the cells and are white are not dead, but the bees have failed to seal their cells. This happens sometimes and many people are deceived by the appearance of the grubs, especially when their heads turn dark. It makes them look very bad. The cells in which you see something which you think is grainy simply contain a lot of royal jelly; at least that is what I presume, for I cannot think of anything else.

The hive appears to me to be too full of honey to give the queen much room to lay. I would suggest that you extract the honey out of one comb that has no brood and put that comb back in the middle. I believe that the queen will lay in it at once. What they need is a little inducement to work.

There may be something wrong with this colony, but it does not appear to me from your description.

EARLY QUEENS FOR STRONG COLONIES. KEEPING COMBS

My bees appeared to winter finely with brood chamber and half-depth hives; were flying freely during the winter and early spring. I gave them an extra hive body, placed it on the bottom board, and now when I reversed the two hive bodies I found but little brood in any of the eighteen colonies, and quite a number queenless. Plenty of honey in hives and a considerable number of bees. Will it pay to put queens in those hives?

I paid for some queens last fall which I have not received as yet, but have no money to buy package bees.

If I lose most of the bees, can I do anything to save the combs, all Dadant's wired foundation?

None of my combs have been extracted, but for two seasons, however, some of them are full of some kind of a pasty-like substance. Should such combs be returned to the bees?

IOWA.

Answer—My impression is that you made a mistake to give your bees an extra hive, as it probably gave them more room than they could well keep warm and it lessened the brood rearing.

It will certainly pay to put queens in the queenless hives if they have bees enough to fairly cover five combs.

You say that you paid for some queens last fall which you have not yet received. The breeder who received your money should send them to you at once. If he does not do so, we want to know his name, for we

do not allow anyone to advertise in the American Bee Journal who does not promptly fill the orders that he gets.

If you lose the bees, you can save the combs by putting them away until your live colonies can fill those combs. However, you should watch those combs for fear of moths. If moths should show in them, either burn brimstone under them, in a closed room, or pour bisulphide of carbon on a rag and place it at the top of the combs in a closed hive.

The pasty substance you mention is probably pollen and will be used by the bees in breeding.

APPEARANCE OF COLONY SHORT OF STORES

Last summer I purchased a young swarm in box-hive to get the start with bees. They came through winter in good shape and I decided to get one or two swarms from this colony, for which I purchased some hives from your firm and am ready for.

What's alarming me now is that I noticed the bees carry out a number of dead brood. Some of these are nymphs, natural white color; some are young bees, in most cases alive but abnormal or crippled; some are young drones, dead and alive. I am afraid that disease may be present, yet the colony seems to be fairly strong and very active.

Could anything else be responsible for this—probably chilled brood? Does any brood die in a healthy colony?

I remember as a boy, in my father's box-hive apiary some thirty years ago, I used to watch bees carrying dead young out of hives, but no one ever paid any attention to that.

MISSOURI.

Answer—From your description, I judge your colony may be short of stores, so that they find it difficult to feed all the brood. I cannot find any other explanation. Examine it and I am quite sure that you will find very little honey.

The remedy would be to give them food whenever there appears to be a shortage of flowers or when the weather is bad so as to force them to stay home.

Of course, if they are short of stores, they will not increase as fast as they should and the crop will not be as good.

PARALYSIS

I would like to have all the information on bee paralysis that I can get. Every spring we have one or two light cases, but this season it is a serious thing here; 90 per cent of our colonies have it and it is weakening them to such an extent that we are doubling them up. Have used sulphur, but cannot see that it has done any good.

As I have never read much about it in the bee journals or had much experience with it, I am at a loss as to what treatment to give. Have read in A B C X Y Z about it, but the information is not very definite.

WASHINGTON.

Answer—The disease to which you refer must be the same as what we call constipation, or inability to discharge their excretions. They become unable to fly and lose their hairs.

This is usually due to inferior honey. The old world remedy recommended for this trouble is to feed the bees with honey mixed with a preparation of boiled lavender, garden ginger, rosemary and other tonic preparations, diluted in wine. We have never been much troubled with this disease, but we have heard considerable complaint of it in Europe, where it is generally called "May disease." Requeening may help.

Sulphur, in combating this disease, simply kills the diseased bees, but does not help the healthy ones. Try moving the colony to a fresh location.

"MAY DISEASE"

I have a colony of bees—mixed race—the young bees of which, when just hatched out, seem affected with a kind of nervous

disease and soon die or are killed by the other bees. They are smaller than the other bees and are very shiny and black—much blacker than the others. They just crowd out on the front of the hive and flutter or buzz. I never see one of them working.

I have been told that this is a form of bee parapox, due to a deficiency in food in early spring, and that when blooms come on this would stop, but they don't seem to get any better. There are lots of bees yet, but it seems to take all the energy to grow young bees and they are not making honey.

TEXAS.

Answer—We have often seen bees similarly afflicted, only they are not young bees, but adult bees that have caught a disease which is commonly called "May disease" in Europe. It is caused, we believe, by the consumption of unfit honey, during the confinement of winter, and becomes epidemic. It sometimes shows constipation.

The best cure is feeding the colony with sugar syrup. But it usually passes away with the first crop of nectar.

Try feeding them thin food mixed with some tonic, such as pepper, lavender, ginger, etc. They require some sort of tonic.

Meetings and Events

Missouri Valley Conference and Demonstration of the Use of Chlorine for Foulbrood

One of the best summer meetings this year will be held May 25 to 26 in the apiary of W. A. Jenkins, Rock Port, Missouri, about halfway between Kansas City and Omaha, on the R. L. & N. Railroad and on Missouri Highway No. 1.

Kansas, Nebraska, Iowa and Missouri beekeepers are planning to attend. This conference is sponsored by the colleges of agriculture and the extension services of these four states in cooperation with Mr. Jenkins and other local beekeepers. Mr. Jenkins has planned to demonstrate the treating of diseased combs by the use of chlorine, and the results



Dr. Tanquary will lead the discussion of the chlorine treatment.

for May, 1932



DISPLAY YOUR HONEY PERFECTLY

Dependable Service on Standard Sizes

Our fluted honey jars are made as per specifications of Standardization Committee of the American Honey Producers' League

Distributed by

DADANT & SONS, HAMILTON, ILLINOIS

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HART
BOTTLES & JARS

Don't Forget That We Give 25% Overweight of YOUNG ITALIAN BEES

| Prices with young Italian or Caucasian Queens | 2 lbs. | 3 lbs. |
|---|--------|--------|
| 1 to 4 packages | \$2.25 | \$2.75 |
| 5 to 24 packages | 2.10 | 2.60 |
| 25 or more packages | 2.00 | 2.50 |

EXTRA QUEENS \$.60 EACH — FOR JUNE PRICES WRITE

ROY S. WEAVER & BRO. :: NAVASOTA, TEXAS

Mention the American Bee Journal When Writing Advertisers

The Gentlest Bees Under the Sun

to Mother Strong, Long Living Colonies



Start new colonies with Caucasian packages. Requeen with Caucasian queens. You will be surprised at the difference and the added pleasure that your bees will bring you. Pure Mountain Grey Bees—Right from the Caucasus. Prices:

| Queens | Packages | Two-pound with queen |
|-------------------|----------|-------------------------------|
| 1-5, each | \$1.00 | 1-4, each \$3.50 |
| 6 | 5.50 | 5-9, each 3.25 |
| 12 | 10.00 | 10-24, each 3.00 |
| 25-99, each | .80 | 25-99, each 2.75 |
| 100 or more, each | .75 | 100 or more, each 2.50 |
| | | Three-pound packages, add 75c |

Free descriptive circular about these wonderful bees — Send for copy.

Caucasian Bee Company . . . Repton, Alabama



Strawberry Plants

Strawberries are a desirable source of added income and a pleasing dish for the home table. To enable us to supply plants for our customers, we have contracted with Melvin Pellett to grow them for us at his Iowa gardens.

The Dunlap is the most popular variety grown in the Middle West. It is perfect flowering, a vigorous grower, a free plant maker, and produces an abundance of fine fruit.

100 postpaid \$1.25
200 postpaid 2.00
1000 by express collect 6.00

Dadant & Sons, Hamilton, Ill.

We offer fresh dug, vigorous young plants, shipped direct to your address at planting time in early spring.

Address all orders to

Good Italian Queens

Produced by our southern queen breeder, Mr. Norris, who spent four seasons with our northern queen breeder, Mr. Mel Pritchard. Queens are produced from Root stock breeding queens. Watch for June ad on Northern Bred Queens, ready for our customers about June 10.

Queen Prices

| Quantity | 1-9 | 10-24 | 25 or over |
|-----------------|-------------|----------|------------|
| Untested Queens | \$1.00 each | .90 each | .75 each |

Note: Our Untested Queens are young, laying queens reared this season. They are furnished in Deyell mailing and introducing cages that help to insure safe introduction.

Package Bees

Try our special 2 1/2-lb. package with young, laying Italian queens, for \$3.10. It is an intermediate sized package that ships well and gives good satisfaction.

The A. I. Root Company, Medina, O.

of treatment will be ready for examination at that time.

A tentative program follows: Dr. M. C. Tanquary, professor of apiculture of the University of Minnesota, will be present and lead the discussion of the chlorine treatment. His articles in the American Bee Journal have attracted wide attention and his discussion of this topic will be an event beekeepers cannot afford to miss.

Dr. R. L. Parker, professor of apiculture of the Kansas Agricultural College, will discuss "Fruit Pollination." Professor F. B. Paddock, of the Iowa State College, will discuss "Queen Breeding and Races of Bees"; Professor O. S. Bare, of the University of Nebraska, will talk on "Roadside Marketing," and James I. Hambleton, senior apiculturist, in charge of federal beekeeping work at Washington, D. C., is scheduled to discuss "Grading, Standardization, and Marketing of Honey."

The two days will be filled with worthwhile things and a tour is being planned to Mr. Edgar Stewart's commercial yard at Fairfax, Missouri. It is a good chance to meet some of the best men in beekeeping, as well as see a good modern commercial apiary. Write any of the four colleges mentioned for further particulars.

George D. Jones,
Extension Entomologist.

The Status of Kansas Regulations

In your April number, on page 159, you have a statement about the Kansas regulations which needs correction. The new apiary inspection law in Kansas has been in effect since March, 1931. It was not enforced that year because of the lack of funds. Your item says that all bees or honey sold or transported in Kansas must have a certificate of inspection. This is not stated correctly and it must be remembered that it is not included in the regulations and rules of the 1931 law above mentioned. The correct statement of the previous regulation was that "All honey producers or dealers transporting honey into or within the state of Kansas must file with the secretary of the Kansas Entomological Commission and the state apiarist, each, a copy of a valid apiary certificate which shall accompany each shipment of honey, showing apiary or apiaries from which the honey originated to be free of American foulbrood."

The regulation now reads in the new 1931 law: "All honey transported into or within the state of Kansas from certified apiaries should bear a copy of the number of the certificate of apiary inspection and date of expiration."

There is appropriated each biennium \$6,000.00 for apiary inspection, which sum will be used to

finance the work, and the beekeepers are not being compelled to pay for apiary inspection, as your item indicates.

Any beekeeper in Kansas wishing an apiary inspection certificate should file with the state apiarist, before the inspection work begins each year, a request for inspection, so the work may be organized and the limited funds may do the greatest good. The use of the inspection work usually begins during the early part of May.

The Kansas Entomological Commission should have the cooperation of Kansas beekeepers in regard to the law and its rules and regulations, and all of us should work together to improve beekeeping conditions in the state.

R. L. Parker,
State Apiarist.

John Nebel, of High Hill, Missouri, Passes On

John Nebel, senior member of the firm of John Nebel & Son Supply Company, and one of Missouri's pioneer beekeepers, passed on suddenly March 26. Mr. Nebel and his father were the founders of one of the largest beekeeping businesses and queen-rearing enterprises west of the Mississippi River, and it is a loss to that section to have him pass on.

The organization, however, will be continued by his two sons, Harold L. and Charles Lester Nebel, who have been closely associated with their father since leaving school.

Illinois Loses E. S. Lake

Vincent Peifer, of Lincoln, Illinois, informs us of the recent death of E. S. Lake, life-long resident of the Lincoln neighborhood and a beekeeper of considerable reputation in Logan County.

He was a director of the Department of Education and Psychology at Lincoln College, and death was due to complications following an illness of several weeks. Professor Lake's influence in central Illinois educational fields has been considerable and his activity in the work of

**Attractive New Labels
for the New Hazel-Atlas
Bee Hive Jars**

Ask for samples and prices. Sized to fit the three jars. See above ad for this brand new honey jar design.

You will like them, and our labels for them are just right in size and colors.

Write us for label samples. A full line of labels in our sample catalogue for all kinds of honey jars and pails.

Write

American Bee Journal
Hamilton, Illinois

**NEW
BEE HIVE
HONEY JARS**

A practical design—
attractive for table service

in $\frac{1}{2}$ pound, 1 pound
or 2 pound sizes complete
with either Gold
or White screw caps.

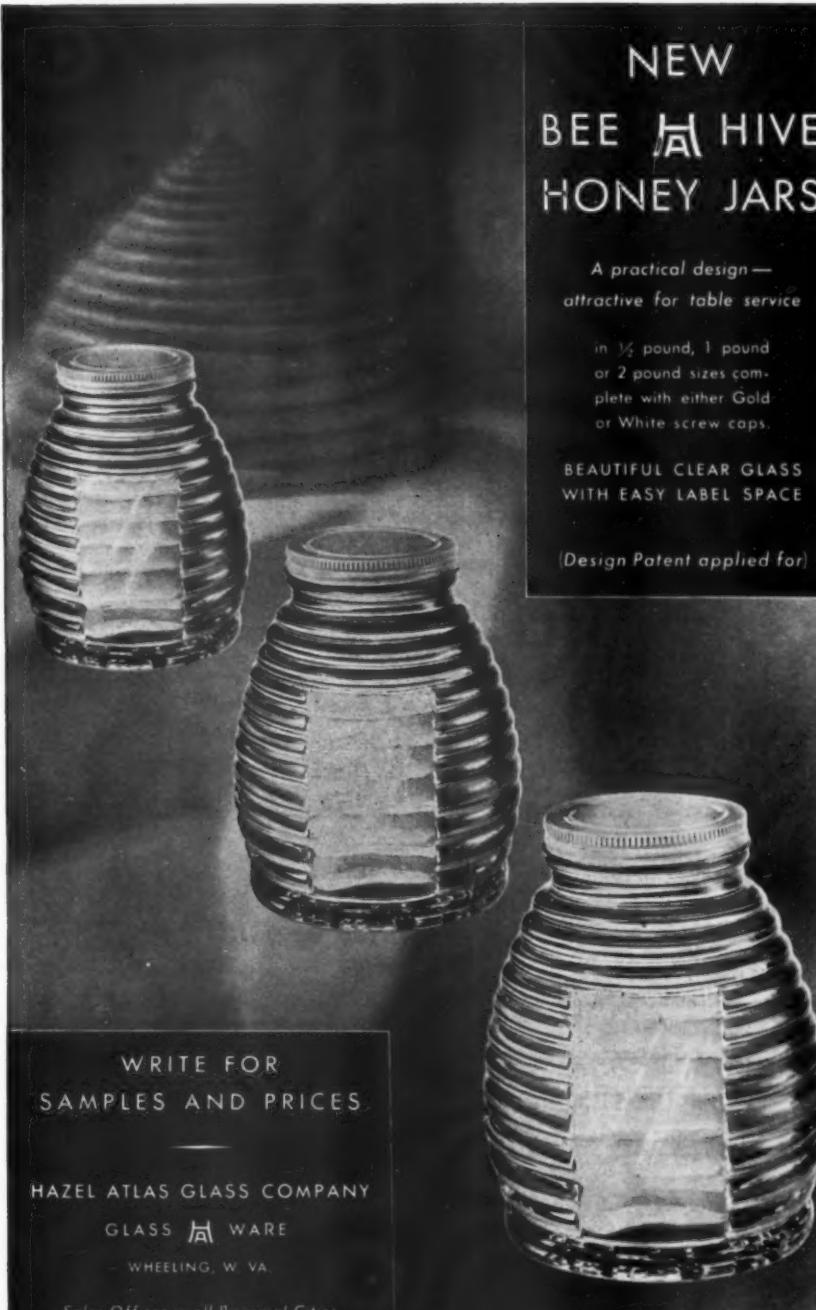
BEAUTIFUL CLEAR GLASS
WITH EASY LABEL SPACE

(Design Patent applied for)

WRITE FOR
SAMPLES AND PRICES

HAZEL ATLAS GLASS COMPANY
GLASS WARE
WHEELING, W. VA.

Sales Offices in all Principal Cities




STOP LOOKING

Williams Italians Will
Fill Your Supers

Packages that have a reputation of making honey the first year, if there is nectar to get.

Queens that put life and energy into your laggards

And we have selected—AND SELECTED—for years, for disease resistance, handling qualities, and honey gathering ability.

PACKAGES—with select queens, for April delivery: 1-10, \$2.50 each; 10-49, \$2.25 each; 50 or more, \$2.00 each. Three-pound packages 75c more each.

QUEENS—75c.

Select Stock—Prompt Service—Young Bees—Full Weight.
No Disease—Satisfaction Assured

P. M. WILLIAMS, MOUNT WILLING, ALABAMA

Mention the American Bee Journal When Writing Advertisers

The Proof of the Package Is the Honey Crop

Our packages produce crops of honey that more than pay the slight additional cost. Certified and accredited by the Alabama Department of Agriculture

Two-pound package with queen, \$2.75; ten or more, \$2.50 each

Three-pound package with queen, \$3.50; ten or more, \$3.25 each

Queens, 75¢ each. Canadian money accepted at par

Safe arrival and satisfaction guaranteed. Health certificate with each shipment.

Write for descriptive circular and complete price list

J. M. CUTTS & SONS, Route No. 1, Montgomery, Ala.

the Young Men's Christian Association was outstanding.

Prof. Lake was a graduate of the University of Illinois and the University of Michigan. During his summer months he devoted his time to farming and beekeeping, and to see him working with his bees on a hot summer day, one would not have thought that he was a college professor, but just an ordinary farmer. Illinois suffers a loss in its beekeeping personnel in the loss of Prof. Lake.

Fire in Plant of Pacific Slope Honey Company

A fire of undetermined origin caused considerable damage to the honey packing plant of the Pacific Slope Honey Company, of Seattle, Washington, early in the evening of March 22. Although actual fire damage was limited to the fourth floor of the building in which the honey company occupies the third floor, tons of water pouring down from above ruined many honey labels, cartons, and other equipment, besides soaking the cases containing two-five-gallon cans of honey which were stored in the large warehouse. Many empty five-gallon cans were saved from damage by prompt action in wiping them with oiled rags. Plant packing operations were stopped for more than a week while the warehouse and plant were cleaned. The Pacific Slope Honey Company is jointly owned and operated by the Mountain States Honey Producers' Association and the Western Washington Beekeepers' Association.

N. N. Dodge.

"BETTER BRED"

Italian Queens and Package Bees at Prices Never Heard of Before

Can you afford to overlook these prices on our fine baby package bees? If there's ever been a time when you should replace your winter losses, it's now.

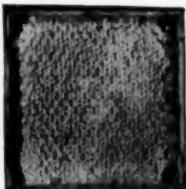
| | | | |
|--------------------------|--------|-------------------|-----|
| 2-lb. package with queen | \$1.50 | Queens, up to 100 | .50 |
| 3-lb. package with queen | 2.00 | Over 100 | .40 |

Canadian customers add exchange

We are in position to handle any size orders and give immediate shipments. Satisfaction fully guaranteed.

CALVERT APIARIES, Inc., Calvert, Ala.

R. G. HOLDER

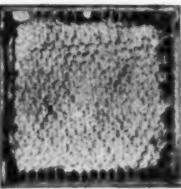


Fancy Section Honey

Dadant's Surplus Foundation

A STANDARD OF PERFECTION

This foundation gives each section a delicate center that blends perfectly with every bite. Remember, well pleased customers are the comb honey producer's biggest asset.



Choice or No. 1 Sections

Sold by all Lewis - Dadant Dealers

DADANT & SONS, Hamilton, Illinois

GASPARD'S High Quality GOLDEN and THREE-BANDED Italian Queens, Packages.

FOR THE SEASON OF 1932 AT THE FOLLOWING PRICES

Special orchard package or early builder, composed of a three-frame nucleus, three additional pounds of bees with a select young queen introduced, for \$3.50 each, any number. Two-pound packages with select young queen, one to nine, \$2.25 each; ten or more, \$2.00 each. Three-pound packages with select young queen, one to nine, \$2.75 each; ten or more, \$2.50 each. Four-pound packages with select young queen, one to nine, \$3.50 each; ten or more, \$3.25 each. Two-frame nucleus with select young queen, one to nine, \$2.25 each; ten or more, \$2.00 each. Three-frame nucleus with select young queen, one to nine, \$2.75 each; ten or more, \$2.50 each.

All bees are shipped on standard Hoffman frame of brood and honey. Prompt and efficient service, safe arrival guarantee, and a health certificate with each shipment. All loss will be immediately replaced upon receipt of bad order report signed by express agent. Shipping season started April 1. Orders booked with 10 per cent down, balance at shipping time. Also ship combless packages, if wanted, at same price as comb packages. All prices are F. O. B. shipping point. Address

J. L. GASPARD :: HESSMER, LA.

Institute Committee Busy in West

Dr. R. L. Webster, secretary-treasurer of the Washington State Beekeepers' Association, announces considerable activity on the part of the American Honey Institute committee of the association. Following the appointment of nearly thirty committee members in various parts of the state by President C. W. Higgins, multigraphed sheets containing information regarding honey have been sent to all committee members by the secretary. Members have been instructed to place these sheets in the hands of newspaper editors, home economics teachers, club women, and secretaries of business men's clubs. Committee members are carrying out a program of spreading honey publicity throughout the state of Washington which will terminate in a supreme effort during National Honey Week next fall. Facts about the food and health values of honey coupled with statistics showing the value of honeybees to the state, especially as pollinizers of fruit blossoms, and suggestions for the use of honey in the daily menu, make up the information contained in the copy

which is being distributed. Washington beekeepers hope that this program will prove an effective means of pointing out to the people of Washington the importance of bees to agriculture of the state, thereby encouraging an increasing consumption of Washington honey.

N. N. Dodge.

Ultraviolet Light Detects False Honey

Ultraviolet light, already of proved worth as a detective in searching out hidden writing and exposing bogus art, now protects dealers in honey against adulterated sweets. Two Danish scientists, S. A. Schon and J. Abildgaard, have found that genuine honey absorbs ultraviolet radiation at a fairly even rate, but artificial honey has a pronounced "absorption band" at one spot—that is, one place in the spectrum of the radiation passing through it where no rays come out. This absorption band is due to the presence of a substance known as hydroxy-methyl-furfural, characteristic of artificial honey, but absent from the genuine product. By the study of this absorption band it is even possible to obtain a quantitative estimate of the amount of adulterant used in a suspected sample.—Science Service.

Iowa Program for Profitable Honey Production

This is the title of a clip sheet which is being sent out generally throughout Iowa in the interest of beekeeping. It contains good advice. To queen frequently with improved bees; to keep bees in modern hives with good combs and sufficient storage room; winter only strong colonies with plenty of stores and sufficient protection; keep down swarming; and to detect disease early and eliminate carefully.

Utah Registration 70,000 Colonies

According to Dan H. Hillman, state apiarist of Utah, the number of colonies in the state registered for 1932 is 70,000, which, if the season is normal, should at least produce the average crop of well over one hundred carloads for the state. About half of this amount is shipped out. The other half is marketed locally. An average production of seventy pounds per colony is figured for the state.

This gives the valuation of bees and equipment well over one million dollars for Utah, safeguarded by twenty-seven county inspectors, under Mr. Hillman.

Glen Perrins.

Lowest "Repression" Prices Ever Known

Lower Express Rates Beginning May 15th

Along with the one-third Lower Express Rates (Effective May 15), these prices make Berry's Reliable Quality Bees the lowest in price ever known. You cannot afford to pass them up at this price.

| | 2-lb. Pkgs. | 3-lb. Pkgs. | 4-lb. Pkgs. |
|----------------------------------|-------------|-------------|-------------|
| 1 to 10 Pkgs. with Sel. Queens | \$2.00 each | \$2.50 each | \$3.00 each |
| 10 to 20 Pkgs. with Sel. Queens | 1.75 each | 2.25 each | 2.75 each |
| 20 to 50 Pkgs. with Sel. Queens | 1.65 each | 2.15 each | 2.65 each |
| 50 Pkgs. and up with Sel. Queens | 1.50 each | 2.00 each | 2.50 each |

On queenless packages deduct 25c each package

After May 15, 25c each package less

All our packages are 10 to 25 per cent overweight and contain virtually all lately hatched baby bees just right for service. Nothing pays as well as the adding of a few of these young bees to your wintered-over colonies just at the opening of the honeyflow.

Warranted Purely Mated Italian Queens Now 60c each

After May 15, 50c each, three for \$1.25, and \$35.00 for one hundred

Wings of queens clipped when wanted and free of charge. All queens in packages and otherwise are select quality. None are shipped that we ourselves would not use. The culs we destroy. We have no disease and a certificate of health accompanies all shipments.

M. C. Berry & Co., Box 697, Montgomery, Alabama

38 Years Breeding Only the Best



Treat yourself to a new veil and smoker each season, as you are entitled to this satisfaction in your work. They are guaranteed to please you. If your dealer cannot supply you, write to us.



Woodman's Folding Wire Bee Veil, 75c each, postage 8c extra. Sometimes known as the 100% veil. A meeting of 36 Bee Inspectors when given their choice of veils, all chose Woodman's.

Woodman's Bingham Bee Smokers, Smoke Engine 4x7 stove size, now priced at \$1.00. With shield at \$1.25. Shipping weight 2 1/2 lbs., postage extra. On the market more than fifty years.

Send for Woodman's printed matter on 8 sizes and styles of honey extractors ranging in price from \$7.50 to \$40.00; and general extracting equipment.

A. G. Woodman Co. . . Grand Rapids, Michigan

BURLESON'S Package Bees } for May Shipments

2-lb. Package with Queen—1 to 10, \$1.75; over 10, \$1.65 each

3-lb. Package with Queen—1 to 10, \$2.25; over 10, \$2.00 each

Satisfaction guaranteed, same as if we were getting war time prices. Write or wire your orders, sending money, and giving shipping dates

T. W. Burleson & Son . . . Waxahachie, Texas

Bright ITALIAN Package BEES and QUEENS

ALL PACKAGES HEADED BY FAMOUS "DIAMOND" SELECT LAYING QUEEN

| | |
|--|--------|
| Two pounds with queen | \$1.75 |
| Three pounds with queen | 2.25 |
| Five pounds with queen (Orchard Package) | 3.25 |
| Two-frame nuclei with queen | 2.40 |
| Three-frame nuclei with queen | 3.10 |

Lower prices in large quantities

Queens 40c each, postpaid. We exclude the drones and allow full overweight. Orders filled promptly. Health certificate furnished. Safe arrival and satisfaction guaranteed.

ANNOUNCEMENT: Effective May 16, express rate on live bees reduced by one-third.

GARON BEE COMPANY . . . DONALDSONVILLE, LA.

Look . . . 2-Pound Package, \$1.60

3-POUND PACKAGE \$2.15

Special prices in lots of 100 or more.
We guarantee complete satisfaction.
Order Direct from This Advertisement.

Geo. A. Hummer and Son
Prairie Point, Mississippi



Beekeepers Take Notice

For thirty years we have specialized in the manufacture of Sections from the whitest selected Wisconsin basswood.

We also manufacture hives, supers, frames and shipping cases.

Write for our free illustrated catalog.

Marshfield Manufacturing Company
Marshfield, Wisconsin

Yancey Hustler Bees and Queens

Three-Band Italians -- Ready to Go Now

| | 1-9 | 10-24 | 25-49 | 50 up |
|--|--------|--------|--------|--------|
| 2-lb. Package with Queen | \$2.25 | \$2.15 | \$2.00 | \$1.80 |
| 3-lb. Package with Queen | 3.00 | 2.90 | 2.75 | 2.50 |
| Queens—every one select:—70c each; \$7.00 per dozen; \$50.00 per 100 | | | | |

We give you—25% overweight; young bees; no drones; prompt, personal service

We guarantee—To ship only pure Italian bees; all queens purely mated, and to give you good service as layers; safe arrival and your complete satisfaction on everything.

YOU CAN STILL MAKE MONEY WITH OUR PACKAGES

CANEY VALLEY APIARIES
Bay City Texas

RED RIVER VALLEY APIARIES

The home of three-banded Italians. No better bees and queens produced. No better service to be had. Safe arrival and satisfaction guaranteed. Twenty-seven years among the bees. I know what I produce and how to ship. Satisfied customers from California to Maine, and every province in Canada.

No deposit required for placing your order. The most northern shipper in Dixie, guaranteeing you quicker and cheaper transportation.

2-lb. package with queen \$1.75
3-lb. package with queen 2.50

Queens 45 cents each

Shipping points: Arthur City and Paris, Texas

J. G. BRUNSON :: CHICOTA, TEXAS

HONEY GROVE APIARIES

Queens By Return Mail 50c

We are in better position to furnish you choice three-banded Italian queens at reasonable prices than any breeder in the South, and we can ship you the best queens you ever had.

Phone, write, or telegraph us your order. Wholesale quantity prices on request.

Safe arrival, prompt service and entire satisfaction guaranteed.

We accept Canadian money.

O.D. RIVERS, POWDERLY, TEX.



CAUCASIANS

have all the good traits of Italians, plus extra gentleness, less swarming, more dependable workers, longer tongues and less robbing.

| | |
|--------------------|--------|
| 1 untested Queen | \$.90 |
| 6 untested Queens | 5.00 |
| 12 untested Queens | 9.00 |

CARNIOLANS

Best of winterers, rapid building up in the spring, very gentle, very prolific at all times, most excellent workers. My own and JanStgar imported strain. 20th year with them.

| | |
|--------------------|--------|
| 1 untested Queen | \$.80 |
| 6 untested Queens | 4.50 |
| 12 untested Queens | 8.50 |

Queens ready, May 25th on.

ALBERT G. HANN, Glen Gardner, N. J.

PURE THREE-BAND ITALIAN BEES

| | |
|-------------------------------|--------|
| Two-pound packages, 1-9, each | \$2.25 |
| Two-pound pkgs., 10-100, each | 2.00 |
| Tested queens, each | .75 |
| Untested queens, each | .60 |

J. ALLEN :: Catherine, Alabama

Accredited
and
Certified



THRIFTY Bees & Queens

Two-Pound Packages

| | |
|----------------|-------------|
| 2-lb. Packages | \$1.75 each |
| 3-lb. Packages | 2.25 each |

We ship overweight packages of young, THRIFTY bees that build powerful colonies in time for your honeyflow.

Thrifty Queens

1 to 24 untested queens, 50c each; 25 or more, 45c each.

If information is wanted about accredited and certified bees, write us.

Thrifty Bees Are Guaranteed to Please.

We can make prompt shipment.

W. J. Forehand & Sons

Fort Deposit, Alabama,
Since 1892

Crop and Market Report

Compiled by M. G. Dadant

For our May crop and market report we asked reporters to answer the following questions:

1. How much honey left on hand?
2. How did bees winter?
3. What are the crop prospects?
4. Has honey sold sufficiently well to put beekeepers in better position than the general farmer?

Honey Left on Hand

Only one state reports a very heavy amount of honey left on hand, and that is Florida, with practically the entire 1931 crop left, there being a lot of 1930 crop undisposable of when the new 1931 lot was extracted.

Other states which report a considerable amount are Pennsylvania with 50 per cent, Colorado and Nevada with 30 to 40 per cent, and Virginia and Oregon with 25 to 30 per cent. All other states report less than 25 per cent and quite a number of them report all honey well disposed of and buying honey. These states are Connecticut, Iowa, Missouri, Wisconsin, Minnesota, Kansas, and California. The western provinces of Canada also report practically all honey cleared up. This, of course, refers to our reporters, as undoubtedly there is a quantity of honey left even in these states, but not enough to make a very large percentage. All in all, the volume of honey left probably does not exceed 10 to 15 per cent in the entire United States. Inasmuch as some of the California crop is already being gathered by the bees, this is about the amount that would be desirable.

As before reported in our page, undoubtedly there are a lot of distressed lots still left on hand, but the aggregate is not great, although there has been no strengthening of the market—in fact somewhat of a weakening in California areas where Hawaiian honey has come in to compete.

Bees Wintered

Bees have wintered remarkably well throughout the eastern and central-western section. The intermountain territory does not report as good wintering, particularly where the severe cold lasted for so long. The states of South Dakota, Colorado, Utah, Nevada, Idaho, Oregon and Washington particularly report somewhere in the neighborhood of a 15 to 25 per cent loss. The southern states report a backward condition also owing to the cold weather after the early opening up of spring. All in all, however, we believe that bees have wintered at least up to normal and perhaps a little above it.

Crop Prospects

The crop prospects appear to be unusually good throughout the central belt extending from the New England states to the Rocky Mountains. This means that the white clover belt appears to be in shape for a crop if weather conditions are favorable from now on. It does not mean, however, that indications are for a bumper crop of white clover everywhere. Many of the states report spotted conditions—that is, clover thick in some spots and lacking in others, owing to the very dry weather. The places where clover seems to be the shortest are the areas which were worse affected by the drouth

last year, namely, Minnesota, Wisconsin, and part of the Dakotas.

In the southern states the conditions seem to be less than normal, owing to the cold weather, which destroyed a considerable portion of the early bloom and the fact that there has not been the normal amount of moisture. Particularly is this true of Georgia and of Texas. Georgia and northern Florida have suffered from drouth over a long period. Northern Texas apparently is having a prolonged drouth just at present which appears will cut down the possibility of crop unless it is relieved soon.

Beekeepers in Good Position

Our question as to whether beekeepers were in better position than the average farmer met with a variety of answers. Roughly speaking, we would say that where the beekeeper had a well worked up local market and had maintained it through years, he has been able to dispose of his crop this year to a very good advantage and is in a better position than the average farmer. This is, of course, with the proviso also that he had honey last year to dispose of. Many sections were very short of honey last year and naturally had nothing to dispose of, so that even a good price did no good.

The commercial sections, where shipments of honey have to find their way into the general market, apparently are not much better off than other farmers in their same section, from what the reporters say. Lately there appears to be a breaking of the market from the fact that some of the heavy producers are letting loose their crop to be sure to be disposed of it before the new crop starts coming in.

However, there were a considerable number of reporters who were emphatic in stating that beekeepers were far better off than the average farmer.

As stated before, those who did not think so were located either in the extreme southeast, where the honey market has been glutted this year, or in the intermountain territory, where shipments have to be made out of the country and on to the general markets.

Summary

All in all, we would estimate that the bees are at least in average condition and that the prospects for a honey-flow are above average in most sections of the country, owing to the preponderance of white clover in central sections and large amounts of snow in the mountain areas, which will leave water for irrigation. The condition is far above a year ago apparently, but, of course, all will depend upon the weather from now on. As this is being written, on April 20, the most of the country seems to be lacking in rainfall, which, of course, prevents the clovers from shooting out as they otherwise would.

There does not seem to be any excessive carryover of honey—in fact less, we believe, by a good deal than there was at this same time last year.

California is already gathering a crop. The state seems to be short on account of the drouth, and the orange honey perhaps a little in excess of last year so far, with the crop only partly gathered.

We Are Cash Buyers of Honey and Beeswax
Submit samples, and best prices, freight prepaid
Cincinnati. We also furnish cans and cases.
Fred W. Muth Co. Pearl and Walnut
Cincinnati, Ohio

Renew Your Subscription
Write for Our Special Club Offers
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Buy and Sell All Grades Extracted Honey
References: 1st National Bank, R. G. Dun or
Bradstreets Commercial Reports.

The BEEKEEPER'S EXCHANGE

Copy for this department must reach us not later than the fifteenth of each month preceding date of issue. If intended for classified department, it should be so stated when advertisement is sent.

Rates of advertising in this classified department are seven cents per word, including name and address. Minimum ad, ten words.

As a measure of precaution to our readers, we require references of all new advertisers. To save time, please send the name of your bank and other references with your copy.

Advertisers offering used equipment or bees on combs must guarantee them free from disease, or state exact condition, or furnish certificate of inspection from authorized inspector. Conditions should be stated to insure that buyer is fully informed.

BEES AND QUEENS

MIDDLE TENNESSEE APIARIES—Italian queens, 60c each. Joe B. Tate, 1029 Lischey Ave., Nashville, Tenn.

DIEMER'S three-banded Italian queens in April and May, 75c each. After May, 50c each. A discount on large orders. Guaranteed and state inspected. Prompt service. J. F. Diemer, Liberty, Mo.

THREE-BANDED Italian queens, gentle honey gathering strain, 50c each. Lilburn Neinast, Brenham, Texas.

BUY the good comb package built on standard frames and drawn from Dadant's wired foundation. Two pounds, two combs and young queen introduced for \$3.75. Jes Dalton, Kenner, La.

IF you like extra yellow Italian bees that are good workers, gentle, and not bad to swarm, my queens will produce them for you. Prices May and June: 1 to 11, 80c each; 12 to 23, 70c each; 24 to 36, 60c each; over 36, 50c each. Tested, \$1.25; select tested, \$2.00. With health certificate. Safe arrival and satisfaction insured. Ask for circular. Hazel V. Bonkemeyer, R. 2, Randleman, N. C.

GOLDEN queens, yellow to tip: Untested, 50c; tested, \$1.00. Satisfaction guaranteed. H. G. Karns, Green Bay, Va.

ITALIAN queens, 50c. Bees, two pounds, \$1.90; three pounds, \$2.50. Orchard package on three frames, equal to six pounds bees, \$4.00. Will trade for white honey or beeswax. Homer W. Richard, 1411 Champnolle, El Dorado, Ark.

CAUCASIAN queens ready after April 10. One, 80c; six, \$4.75; twelve, \$8.40. Write for price on larger quantities. Safe arrival and satisfaction guaranteed. Tillery Bros., R. 6, Greenville, Ala.

BEES AND QUEENS—Two pounds of bees with queen, \$1.75; three pounds, \$2.25. See my large ad on page 219. H. E. Graham, 702 E. Twenty-third St., Cameron, Tex.

WILL EXCHANGE package bees, nuclei or queens for bee supplies. Crenshaw County Apiaries, Rutledge, Ala.

MR. BEEKEEPER—Write and get my prices on bees and queens. A postal card will bring it. Lowest prices possible, quality of the best, full weight of good young bees, queens as good as the best. Safe delivery guaranteed. Our losses average less than 2 per cent; made good at once. Promptness of service. O. P. Hendrix, West Point, Miss.

AS LONG AS the supply lasts, I am willing to give two frames with Italian tested queen and at least four pounds of bees for \$2.50. Satisfaction guaranteed. P. Bessehaar, Bordelonville, La.

SOMETHING NEW

"Honey Jelly," a new way to prepare honey, eliminates the stickiness from honey, but the honey flavor is retained with a slight tartness.

F. J. Edwards' Prepared Pectin,
Honey Well Brand,
P. O. Box 87, Sacramento, Calif.

Postpaid, package, 20c (makes five pounds jelly); dozen packages, \$2.00.

CAUCASIAN queens from the best stock. Tried under Northern conditions. Eventually you will use them. Why wait? One, 75c; ten, 60c. June 1st delivery. Russell-Barnes Apiaries, Box 5, Morrill, Nebr.

WRIGHT'S bright Italian queens after May 20, 50c each. Select young queens that are guaranteed to please. Satisfied customers in almost every state. W. C. Wright, Smithville, Mo.

PACKAGE BEES AND QUEENS—Lower prices for May and June. Two-pound package with queen, 5 to 100, \$1.60 each; two-pound package without queen, 5 to 100, \$1.25 each. Three-pound package with queen, 5 to 100, \$2.10 each; three-pound package without queen, 5 to 100, \$1.60 each. All shipments are made by express. Safe arrival guaranteed. Health certificate with every shipment. Little River Apiaries, Box 83, Gause, Texas.

30% OVERWEIGHT PACKAGE BEES—Three-pound package with queen, \$3.00; two-pound package with queen, \$2.50. Queens, 85c each. Lower prices on quantities. Safe arrival guaranteed. Valley Bee and Honey Co., 530 Mo. Ave., Weslaco, Tex.

BIRD'S CAUCASIANS are acclimated and northern bred, gentle, prolific, best winterers, longest tongues, less robbing and swarming. Try them, be convinced. June queens, \$1.00; twelve, 95c each; twenty-five, 90c each. Bird's Apiaries, Odebolt, Ia.

GOLDEN ITALIANS—The same kind I have sold for many years with no complaint. Untested, each, \$1.00; \$9.00 per dozen; six, \$5.00. Tested, \$1.50 each. Breeders, the best, \$5.00 each. J. B. Brockwell, Barnetts, Virginia.

CAROLINA QUEENS—Line bred, three-banded, leather-colored Italians. The best honey gatherers, hardy and prolific. All orders filled promptly. If any queen is not satisfactory, please return. Not ordinary queens, but as good as the best. Select (one grade only), one to fifty, 60c each; fifty or more, 55c each. Carolina Bee Co., Kenansville, N. C.

CHOICE bright Italian queens that are a pleasure to work with and be proud to own. Queen with stock that has been bred and selected in the North the past 29 years for good winterers, hustlers, gentleness and fine color. One queen, \$1.00; two or more, 90c each; \$9.00 dozen. Breeders, \$10.00 each. Emil W. Gutekunst, Colden, N. Y.

GOLDEN Italian queens as good as the best, with health certificate. Tested, \$1.25; select tested, \$2.00. Untested, 85c; six, \$4.80; twelve, \$9.00. For larger orders, write for prices. Safe arrival, satisfaction guaranteed. D. T. Gaster, R. 2, Randleman, N. C.

PACKAGE BEES AND QUEENS—Pure Italian, the most prolific, gentle honey producers, any number. Two-pound packages, \$2.00 each, with queen; three pounds with queen, \$2.50 each. Queens, 50c each. Taylor Apiaries, Luverne, Ala.

BASSETT'S queens and package bees. Three-banded Italian queens. One, 90c; twelve at 75c each; fifty or more at 65c each. After May 31, 50c each, any number. IXL Apiaries, C. Bassett, Prop., Ripon, Calif.

"QUEENS OF QUALITY"—60c each. Also package bees. Write us for quotations. J. F. McVay, Jackson, Ala.

GOLDEN Italian queens, good honey getters and gentle, 60 cents each; \$6.00 per dozen. A. M. Kelly, Bell, Fla.

GOLDEN Italian Queens and bees for 1931. The big, bright, hustling kind (the kind that get the honey). Prices for May, 65c each; \$6.50 per dozen; \$50.00 per hundred. Two-pound packages with queens, \$2.00 each; three pounds, \$2.50 each. I guarantee safe arrival and health certificate with each package. E. F. Day, Honoraville, Ala.

MAY QUEENS—Good three-banded Italian, 50c each, any number. D. W. Howell, Shellman, Georgia.

RUSCHELL'S Iobred Italian queens, 60c; ten or more, 50c each. Ready June 1. Charles L. Ruschill, Colfax, Iowa.

FOR SALE—Italian bees and queens; nothing but the best. Queens, 50 cents each. One pound of bees with young queen, \$1.75; two pounds of bees with young queen, \$2.75. All charges paid to your postoffice. Add 15 per cent extra to Canada. Graydon Bros., Greenville, Ala., Route 4.

FOR SALE

FOR SALE—250 colonies bees; best standard equipment, painted; with honey to almost pay for them. Terms to right party. L. L. Ferebee, Pineland, S. C.

HONEY FOR SALE

HONEY—Yes, we have it. Chunk, comb and extracted, at prices to sell. W. S. Earls & Son, New Canton, Ill.

WHITE CLOVER honey in sixties, \$8.00 case. Discount large lots. Joseph H. Hoehn, Ottoville, Ohio.

THE Griswold Honey Co., Madison, Ohio, U. S. A., solicits your sweet business and suggests our pure maple syrup and honey maple table syrup will work in well with your honey deliveries. Also maple sugar and maple cream. Reliable, sales guaranteed. Yes, your illustrated circular is ready.

FOR SALE—Fancy white clover comb in $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{8}$ sections. C. Holm, Genoa, Ill.

EXTRA FANCY white comb, \$3.25; fancy, \$3.00; No. 1, \$2.50; No. 2 white, No. 1 amber or buckwheat, \$1.85, in carriers of six cases. White clover extracted, $6\frac{1}{2}$; light amber, 6c; buckwheat, 5c, in sixty-pound cans. C. B. Howard, Geneva, N. Y.

MEDIUM AMBER extracted, 5c, case lots. A. J. Wilson, Hammond, N. Y.

CLOVER extracted honey in new sixties. Your customers will like it. A sample will convince you. Prices reasonable and quoted on request. Prompt shipment and satisfaction guaranteed. Harry C. Kirk, Armstrong, Iowa.

FOR SALE—Clover honey, granulated, 60-lb. cans at 7c per pound. John Thompson, Route 3, Cambridge, Md.

HONEY FOR SALE—Any kind, any quantity. The John G. Paton Company, 230 Park Avenue, New York.

FOR SALE—White clover honey in 60-pound cans. None finer. Satisfaction guaranteed. J. F. Moore, Tiffin, Ohio.

HONEY FOR SALE—All grades, any quantity. H. & S. Honey and Wax Company, Inc., 265 Greenwich St., New York City.

HONEY—We sell the best. Comb in carriers of eight cases each; extracted, basswood, buckwheat, sweet clover, white clover and light amber. Tell us what you can use for prices. A. I. Root Company of Chicago, 224-230 West Huron St., Chicago, Ill.

FOR SALE—Northern white, extracted and comb honey. M. W. Cousineau, Moorhead, Minn.

WHITE clover extracted honey. Write for prices and samples. Kalona Honey Co., Kalona, Iowa.

NEW CROP shallow frame comb honey, also section honey; nice white stock, securely packed, available for shipment now. Colorado Honey Prod. Ass'n, Denver, Colo.

CLOVER honey, choice, ripened on bees. Satisfaction guaranteed. Case or quantity. E. J. Stahlman, Grover Hill, Ohio.

STOLLER'S EXCELLENT quality clover honey, comb and extracted. Unexcelled. The Stoller Apiaries, Lattry, O.

HONEY FOR SALE—Keep your customers supplied with honey. We can furnish white and light amber honey at attractive prices. Packed in 60-lb., 10-lb. or 5-lb. tins. Dadant & Sons, Hamilton, Illinois.

WHITE COMB HONEY—Extracted and chunk. Prices on request. One-pound sample, 15c. F. W. Summerfield, Grand Rapids, Ohio.

CLOVER extracted honey, case or ton. Roy Littlefield, Exira, Iowa.

FOR SALE—300 cases comb honey at reduced prices. State your wants. H. G. Quirin, Bellevue, Ohio.

HONEY AND BEESWAX WANTED

WANTED—Shipments of old comb and cappings for rendering. We pay the highest cash and trade prices, charging but 5 cents a pound for wax rendering. Fred W. Muth Company, 204 Walnut St., Cincinnati, Ohio.

WANTED—A car or less quantity of white honey in 60-lb. cans. Mail sample and quote lowest cash price for same. J. S. Bulkey, 816 Hazel St., Birmingham, Mich.

WANTED—Car lots honey; also beeswax, any quantity. Mail samples, state quantity and price. Hamilton, Wallace & Bryant, Los Angeles.

WANTED—Old combs and cappings for rendering. We get all the wax, charging but 4c per pound for rendering. High cash paid for wax. Ohmert Honey Company, Dubuque, Iowa.

FOR EXCHANGE

WILL EXCHANGE package bees and queens for shipment between April 1 and 23 for woodworking machinery. P. M. Williams, Mt. Willing, Ala.

POSITION WANTED

POSITION wanted in apiary by young man 17 years old. Three years' experience. Excellent references. Lloyd Blanchard, Box 1486, Boston, Mass.

SUPPLIES

U. S. DOLLARS go farther in Canada. Hodgson extracting equipment can be had by U. S. beekeepers at lower prices. Write Hodgson & Sons, New Westminster, British Columbia.

SAFIN queen introduction cage, one, 25c; five for \$1.00. Allen Latham, Norwich-town, Conn.

FOR SALE—Queen mailing cages. Material, workmanship and service all guaranteed. Write for quantity prices. Hamilton Bee Supply Co., Almont, Mich.

BEST QUALITY bee supplies, attractive prices, prompt shipment. Illustrated catalog on request. We take beeswax in trade for bee supplies. The Colorado Honey Producers' Association, Denver, Colo.

FOR SALE — We are constantly accumulating bee supplies, slightly shopworn; odd sized, surpluses, etc., which we desire to dispose of and on which we can quote you bargain prices. Write for complete list

of our bargain material. We can save you money on items you may desire from it. Dadant & Sons, Hamilton, Illinois.

THE DADANT SYSTEM IN ITALIAN—The "Dadant System of Beekeeping" is now published in Italian, "Il Sistema d'Apicoltura Dadant." Send orders to the American Bee Journal. Price \$1.00.

MISCELLANEOUS

TO INCREASE honey crop two-fifths, write me. Delbert E. Lhommedieu, Colo, Iowa.

VIKLA AUTOMATIC swarm trapper. Practical, efficient. Literature free. Vikla Manufacturing Co., Lonsdale, Minn.

GROW VITEX TREES for beauty and bees. Twelve- to 24-inch trees, 30c each; twenty-five or more at 25c each; 24- to 36-inch trees, 50c each; twenty-five or more, 40c each, all prepaid. Seed at \$1.50 per ounce. Joe Stallsmith, Galena, Kansas.

PLANS FOR POULTRY HOUSES—150 illustrations. Secret of getting winter eggs. You need this book. Write for free offer and sample copy of Inland Poultry Journal, 528 Holliday Bldg., Indianapolis, Ind.

MARBLEBOARD BINDER—For back copies of the American Bee Journal. Will hold two years. Keeps your magazines in shape for ready reference. Price only 75c, postpaid. American Bee Journal, Hamilton, Ill.

THE BEE WORLD—The leading bee journal in Great Britain and the only international bee review in existence. Specializes in the world's news in both science and practice of apiculture. Specimen copy, post free, 12 cents stamps. Membership of the Club, including subscription to the paper, 10/6. The Apis Club, Brockhill, London Road, Camberley, Surrey, England.

HAVE YOU ANY Bee Journals or bee books published previous to 1900 you wish to dispose of? If so, send us a list. American Bee Journal, Hamilton, Ill.

STATEMENT OF OWNERSHIP

Statement of the ownership, management, circulation, etc., required by the Act of Congress of August 24, 1912, of American Bee Journal, published monthly at Hamilton, Illinois, for April 1, 1932.

STATE OF ILLINOIS, } ss. County of Hancock,

Before me, a notary public in and for the state and county aforesaid, personally appeared M. G. Dadant, who, having been duly sworn according to law, deposes and says that he is the business manager of the American Bee Journal, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, rendered by the Act of August 24, 1912, embodied in Section 443, Postal Laws and Regulations, printed on the reverse side of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor and business manager are:

Publishers American Bee Journal, Hamilton, Ill.

Editor, C. P. Dadant, Hamilton, Ill.

Managing editor, G. H. Hale, Hamilton, Ill.

Business manager, M. G. Dadant, Hamilton, Ill.

2. That owners are:

American Bee Journal, Hamilton, Ill., owned by

C. P. Dadant, Hamilton, Ill.

H. C. Dadant, Hamilton, Ill.

V. M. Dadant, Hamilton, Ill.

C. S. Dadant, Hamilton, Ill.

L. C. Dadant, Hamilton, Ill.

M. G. Dadant, Hamilton, Ill.

Leon Saugier, Hamilton, Ill.

Joseph Saugier, Hamilton, Ill.

That the known bondholders, mortgagees and other security holders owning or holding one per cent or more of the total amount of bonds, mortgages or other securities is:

None.

(Signed) M. G. DADANT.

Business Manager American Bee Journal.

Sworn to and subscribed before me this eighth day of March, 1932.

MINNIE S. KING,
Notary Public.

My commission expires Nov. 19, 1933.

Honor Roll

(Continued from page 218)

| | | |
|---|------------------------------|---------|
| J. E. Venard, Wilmington | 1.00 | |
| Pickaway County Association | 10.00 | |
| Clarence Deeter, Greenville | 1.00 | |
| Floyd Dennison, Dayton | 423 Brooklyn | 1.00 |
| J. H. Diebel, Columbus | 972 Cleveland | 2.00 |
| Charles Hill, New Milford | 1.00 | |
| Penn G. Snyder, Dayton | 1.00 | |
| N. B. Kelley, Bellefontaine | 508 Ham- | 5.00 |
| ilton Street | ilton Street | 5.00 |
| Earl M. Alexander, New Paris | 10.00 | |
| L. A. Mills, Greenville | 5.00 | |
| Charles Hill, New Milford | R. 1 | 1.50 |
| Ohio State Beekeepers' Ass'n, W. E. | Dunham, Sec'y, Columbus | 50.00 |
| G. H. Gifford, Fayette | 1.00 | |
| J. F. Moore, Tiffin | 80 Hunter Street | 10.00 |
| Seneeca County Beekeepers' Association' | Mrs. Lily Day, Sec'y, Tiffin | 5.00 |
| Pennsylvania | Pennsylvania | 5.00 |
| Emmett Baxter, Philadelphia | \$ 5.00 | |
| E. E. Seitz, Glen Rock | 2.00 | |
| Henry A. Fritz, Bath | R. 1 | 5.00 |
| C. S. Kohler, York | 532 W. King St. | 2.00 |
| K. O. Liebold, Willow Grove | 214 Quigley Ave. | 2.00 |
| Fuller & Fuller, Muncy | R. 3 | 5.00 |
| Earl E. Manges, Buffalo Mills | 1.00 | |
| Wm. G. Schaffer, Coplay | R. 1, Box 61 | 1.00 |
| South Dakota | South Dakota | 1.00 |
| Henry Hall, Hermosa | \$ 1.48 | |
| Walter Hoffman, Madison | 15.00 | |
| Anthony L. Moberg, Brookings | 4.56 | |
| Texas | Texas | 1.00 |
| F. A. Nickell, Leander | R. 3 | .50 |
| T. W. Burleson & Son, Waxahachie | Utah | 25.00 |
| A. W. Anderson, Salt Lake City | 4042 Second Street | 1.00 |
| Vermont | Vermont | 1.00 |
| F. D. Manchester, Middlebury | R. 2 | \$ 5.00 |
| Charles Mraz, Middlebury | 2.00 | |
| Virginia | Virginia | 1.00 |
| J. W. Speers, Ashland | \$ 1.00 | |
| Mrs. Frank L. Lightfoot, Rochelle | 1.00 | |
| Washington | Washington | 1.00 |
| Natt N. Dodge, Seattle | \$ 1.00 | |
| C. W. Higgins, Watapao | 3.00 | |
| J. P. Joubert, Enumclaw | 2.00 | |
| Fred Mandery, Tenino | 4.00 | |
| E. J. Campbell, Olympia | .25 | |
| Floyd Buck, Walla Walla | 4.00 | |
| J. E. Schaefer, Yakima | 1.00 | |
| J. W. Oldham, White Swan | 2.50 | |
| Ada Atwood, Oakville | 2.00 | |
| I. L. Swain, Benton County Bee Inspector, Prosser | 4.75 | |
| Wisconsin | Wisconsin | 1.00 |
| Door County Association | \$ 5.00 | |
| Brown County Association | 10.00 | |
| Mrs. Viola Wood, South Wayne | 1.00 | |
| Chas. N. Roy, Sparta, 114 N. K St. | 1.00 | |
| Robert L. Knutson, Ladysmith | 5.00 | |
| Sheboygan County Association | 10.00 | |
| Washington County Association | 10.60 | |
| Grant County Association | 10.00 | |
| Clark County Association | 10.00 | |
| Sauk County Association | 5.00 | |
| H. Hodgson, Waukesha | 5.00 | |
| Forest B. Kelsey, Delavan | 1.00 | |
| Carl G. Rhapsrock, Plainfield | 1.00 | |
| V. G. Howard, Milwaukee | 4152 South Howell Avenue | 5.00 |
| Holmes Products, Inc., Milwaukee | 120 W. Florida Street | 5.00 |
| E. A. Durax, Chippewa Falls | 816 Dover | 1.00 |
| *Cornelius Meyer, Appleton | 4.80 | |
| *Wilford Perrot, Antigo | 4.80 | |
| (Name not sent) Dexterville | .80 | |
| S. P. Elliott, Menomonie | 1.00 | |
| E. M. Johnson, Blue Mounds | 1.00 | |
| Wyoming | Wyoming | 1.00 |
| A. Knapper, Wheatland | \$ 9.00 | |
| Mr. and Mrs. E. O. Rauchfuss, Powell | 1.00 | |
| George Krause, Riverton | 10.00 | |
| * Name starred indicates this amount was realized through honey sent to Institute receivers. | | |
| Will your name be here in 1933? Subscriptions—20 pounds of honey for each ton produced—or \$1.00 per ton. Mail money to American Honey Institute, 30 Kenmore Road, Indianapolis, Indiana, or send honey to nearest receiver as listed in bee papers. | | |
| Palmetto Queens & Bees | | |
| Quality Bred Italian Bees and Queens will not fail you. One queen, 50c; six, \$2.90; twelve, \$5.50; fifty, \$20.00. After June 1st, 30c each. Two-pound package Italian bees with queens, \$1.75 each, any number. Three-pound packages, 50c each additional package. Booking queen orders for June delivery at 30c each queen. Overweight packages, pure Italian bees, safe arrival and satisfaction guaranteed. Add 10% exchange on Canadian orders. C. G. ELLISON . . . BELTON, S. C. | | |



Summer Prices

(Effective May 5th)

We will supply any number of package bees and queens as follows:

**2-lb. Package with Queen \$1.70
5 or more packages, each \$1.60**

3-lb. Packages, add 50c per package.

**Select Young Queens each, 45c
After May 15th each, 40c**

You can not afford to keep empty equipment at these prices.
Prompt shipment and satisfaction guaranteed.

CITRONELLE BEE COMPANY, Inc.
Citronelle, Alabama

STOP! STOP! LOOK! LISTEN!

Send us your wax to be worked into foundation. Early orders and wax to be worked into Non-Sag Brood Foundation are coming in with a rush. Beekeepers everywhere are using Non-Sag Brood Foundation with gratifying results. Once used, always. Our thin Super Foundation is made of the purest and whitest beeswax obtainable and is giving the best of satisfaction. Try it and be convinced. Write us for samples and prices.

We carry a full line of beekeepers' supplies

GUS DITTMER CO. :: AUGUSTA, WISCONSIN

**WRITE US FOR LETTERHEAD
DESIGNS**

WATERLOO ENGRAVING & SERVICE CO.
WATERLOO, IOWA

Package Bees & Queens

33 1/3% discount from our regular prices

Send for FREE circular and let us know what your requirements are going to be. We furnished one honey producer 600 queens last season, another 500, besides lots of other orders, and at a much higher price than we are asking this year. Have shipped thousands of pounds of bees all over the U. S. A. and Canada.

BLUE BONNET APIARIES
R. 1, Box 33, Mercedes, Texas

**SMITH'S ACCREDITED BEES AND QUEENS
at LOWEST PRICES ON RECORD**

GUARANTEED by us ACCREDITED AND CERTIFIED by the STATE OF ALABAMA.

Write for our MAY prices on PACKAGES; they are very low. Selected queens: One, 50c; ten, \$4.50; twenty-five up, 40c each. After June 1—One, 40c; ten, \$3.50; twenty-five up, 30c each. HIGHEST QUALITY at LOWEST PRICES and a GUARANTEE of SATISFACTION is yours when BUYING from

N. B. Smith & Company ∴ Calhoun, Alabama

Lake Pearl Apiaries

| | |
|----------------------------------|--------|
| 1 Frame of Brood | \$2.00 |
| Two Pounds of Bees and a Queen | \$2.50 |
| 2 Frames of Brood | \$2.50 |
| Three Pounds of Bees and a Queen | \$3.00 |
| 3 Frames of Brood | \$3.00 |
| Three Pounds of Bees and a Queen | \$3.00 |

Isaac Roy, Prop. Hessmer, La.



CALIFORNIA BEE TOOL COMPANY
810 West Pedregosa Street • Santa Barbara, California
WHAT DO THE APIARISTS SAY? It is a very practical tool
and there will be a wide demand for it

Bright Italian Queens

You will be satisfied with them, when you work with bees produced by queens from my Golden Italian stock. They are as fine as you'll get anywhere; very gentle and easy to work with. Exceeded by none. All large and uniform; very prolific, and excellent honey gatherers. By my scientific methods of selection of the best larvae, for queen-rearing, you get the best quality queens.

ORDER QUALITY QUEENS NOW

Single queen, \$1.00; two, 95c each; three, 90c each; four to nine, 80c each; ten to twenty, 70c each; all over twenty, 60c each.

RIEGER'S (Metairie, La.) APIARY
No. 1 Metairie Court, R. F. D. 6,
NEW ORLEANS, LA.

My Golden Italian Queens

The same good quality. Noted for their gentleness and honey gathering. One, 65c each; six, \$3.00; twelve, \$5.50. Satisfaction guaranteed in U. S. and Canada. Your orders appreciated.

E. A. SIMMONS APIARIES
GREENVILLE, ALABAMA

PELLETT'S NEW BOOK "FLOWERS OF THE WILD"

Their Culture and Requirements

By Frank C. Pellett

A naturalist's book about wild flowers. It tells things everyone should know, but overlook. Cloth Binding, 168 Pages, Over 100 Pictures. Price \$2.00; Postpaid \$2.15.

AMERICAN BEE JOURNAL, Hamilton, Ill.

Italian Queens and Bees

2-Lb. Pkg. with Queen \$2.25

3-Lb. Pkg. with Queen \$3.00

Queens 75c ea.; 6 for \$4.20

Satisfaction and Safe Delivery Guaranteed. Delivery May 20 on.

I have the bees of Mr. George H. Rea, of Reynoldsville, Pa., and can send you some fine queens and bees.

RONALD KIRK

R. D. 1, Box 34, Rockton, Pa.

3-lb. Package Any Number \$2.10

We offer full weight three-pound package pure Italian bees. Packages will contain 1932 select untested laying Italian queens. Go by express in light standard cages collect. April-May delivery. Health certificate, safe arrival and satisfaction guaranteed. Eighteen years' experience. 2-Pound Packages, any number, \$1.65. Cash with order insures prompt shipment.

Gooch Apiaries, Farmersville, Tex.

**Get Acquainted with the Improved
"REIF RAPPED"**

Process for Cut Comb Honey for More Profit in 1932

Send 55c plus postage on 54 ozs. for shipping case, 24 cartons, 24 cellophane, to

E. H. REIF . . . KALONA, IOWA

Mott's Northern Bred Italian Queens

Practically non-swarming

Guaranteed purely mated or a free queen, means tested in the end.

May, \$1.00; two or more, 90c each. June, \$1.00; two, \$1.75; six, \$5.00; twelve, \$9.25; one hundred, \$65.00. Select tested, \$2.00. Virgins, 50c. Free list with testimonials. Satisfaction guaranteed.

E. E. MOTT & SON, Glenwood, Michigan

When Writing Advertisers Mention The American Bee Journal**Chlorine Liquid**

The cheapest and quickest method for sterilizing combs and equipment. Write for prices.

JOHN HARNACK & SON
Dealer in Lewis and Dadant Supplies
McGregor, Iowa

Package Bees**For May Shipment**

Overweight packages. Light shipping cages. No disease. Safe arrival and satisfaction guaranteed.

Two-pound packages with queens ---- \$1.70 each

Three-pound packages with queens ---- \$2.10 each

QUEENS

Select untested, guaranteed pure mated, 40c each; lots of ten, 35c each; 100 or more, 30c each.

We can fill your orders promptly

The Crowville Apiaries

Winnsboro, Louisiana

New Low Prices--Pettit's Bees for Blossoms & Honey

Pettit's Five-Pound Orchard Package has several advantages over other methods of supplying bees for blossoms. It contains a large quantity of young, vigorous workers and a young queen—a regular strong swarm ready for hiving and going to work. Or the shipping container may be wrapped and used as a hive without other equipment. It has proved to be so dependable and the Pettit Service so reliable that growers used 500 of them in 1930 and 1,000 in 1931.

Experiments have shown that winter colonies may not contain the volume of bees necessary for effective work in the uncertain weather of blossom time; but where these are on hand they may be built up by adding young bees from Pettit's Combless Packages purchased without queens.

The Following Prices Are for Cash Before Shipping and Complete Satisfaction Is Guaranteed:

NEW LOW 1932 PRICES WITH YOUNG ITALIAN QUEENS

| Size of Order | Five-Pound Orchard Pkg. | Four-Pound Package | Three-Pound Package | Two-Pound Package |
|----------------------|-------------------------|--------------------|---------------------|-------------------|
| One to Nine Packages | \$4.00 | \$3.00 | \$2.50 | \$2.00 |
| Ten or More | \$3.50 | \$2.75 | \$2.25 | \$1.75 |

For Bees Without Queens, Deduct 50 Cents Per Package
Small Orders Sent Parcel Post if Postage Added. Canadian Money Taken at Par

MORLEY PETTIT . . . ALBANY, GEORGIA

An adequate supply of Dadant's Crimp-Wired Foundation will assure you fine combs this season. You are doubly protected, too, when you know it is made of pure beeswax.

DADANT & SONS, Manufacturers, HAMILTON, ILL.

**Jensen's Special May Bargains****To May 15th:**

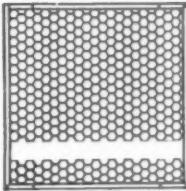
2-Pound Packages with Select Untested Queens \$1.75 each
3-Pound Packages with Select Untested Queens 2.25 each

After May 15th:

2-Pound Packages with Select Untested Queens \$1.60 each
3-Pound Packages with Select Untested Queens 2.10 each

Queens Select untested. Guaranteed to be as good as any, regardless of price. 3-banded Italians only. 3 for \$1.00, any quantity. Prompt Shipment. Satisfaction.

Jensen's Apiaries . . . Crawford, Miss.



Top and bottom starters; the best way to use surplus foundation.

Ready to Help Produce Honey in Illinois, Iowa & Missouri

Bring your problems here. We are ready to help you with them as well as to supply you with a full line of Lewis "Beware" and Dadant's Foundation.

Yours for Service,

DADANT & SONS, HAMILTON, ILLINOIS

There is a Lewis-Dadant Dealer Near You

BEES AND QUEENS GALORE

We are situated on main line of railway that connects with all the main lines of the North and West, insuring your bees to reach you on time and in nice shape. We do not have a single dissatisfied customer that we know of. Will have several thousand pounds of three-banded Italian bees, also several thousand queens, for April and May delivery. Plenty of efficient help to get them to you on time.

Two-pound Package with Queen \$1.60

Three-pound Package with Queen 2.00

Queens, 50 cents each

SHAW & HOMAN, Shannon, Miss.

CAUCASIAN BEES AND QUEENS FOR MAY

"For mountain bees that's gray,
Send your orders this a-way."

Ours are bred from selected high-producing strains that were imported direct from Russia. Package bees with queens: 2-lb. size, 1 to 4, at \$3.50; 5 to 9 at \$3.25; 10 to 24 at \$3.00. Larger size, add 75 cents per pound.

Queens: Untested, 1 to 5 at 90c; 6, \$5.00; 12, \$9.50; 13 to 24 at 75c; 100 or more at 60c. Tested, \$1.50. Select tested, \$2.50.

Safe delivery and satisfaction guaranteed. Health certificate with each order.

Booklet Free.

BOLLING BEE COMPANY, BOLLING, ALABAMA



HURRY YOUR ORDERS HERE



Minnesota Beekeepers

Lowest prices since 1912 and every item equal or better. Lewis Beeware, "Standard of the Beekeeping World." Dadant's Foundation, "Choice of Expert Beekeepers."

You can save more money on your supplies this year than ever, by getting them right close home.

If you live near MINNESOTA, get your supplies quickly here. We fill orders the day they are received.

Lewis Beeware and Dadant's Foundation on hand at all times.



The Standard Lumber Co.
Winona, Minn.--Graceville, Minn.
Brainerd, Minn.

NORMA'S SPECIAL

High quality Italian Queens and Bees at prices to meet with depression prices, as follows:

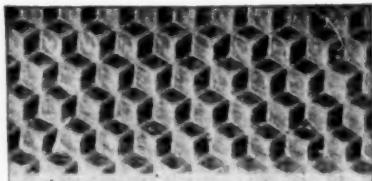
SPECIAL ORCHARD PACKAGES

| | |
|--|-------------------------|
| A 2-frame nucleus, three additional pounds of bees with a young laying queen introduced, for | \$3.25 each, any number |
| 2-lb. packages with young laying queens | 2.00 each, any number |
| 3-lb. packages with young laying queens | 2.50 each, any number |
| 4-lb. packages with young laying queens | 3.25 each, any number |
| 2-frame nucleus with young laying queens | 2.00 each, any number |
| 3-frame nucleus with young laying queens | 2.50 each, any number |

All bees are shipped on standard Hoffman frames of brood and honey. Safe arrival guarantee and a health certificate with each shipment. All loss will be immediately replaced upon receipt of bad order report signed by express agent. Shipping season started April 1. Orders booked with 10 per cent down, balance 10 days before shipment. Also ship combless packages upon request at same price as comb packages.

All prices are F. O. B. shipping point. Address

The NORMA'S APIARIES :: Hessmer, Louisiana
Rev. J. L. Mahussier, Prop.



or want Comb Foundation
It's Thin Sup
MADE OF PURE BEESW
READILY ACCEPTED

That... Chewy Center

Calls the Customer Back

Dadant's
Surplus Foundation
Is Good

Mention the American Bee Journal When Writing Advertisers

GET RUNNING'S AND GET HONEY BEES —THEY SATISFY

Apiary Accredited and Certified by Alabama Department of Agriculture

PACKAGES AND NUCLEI

The kind WE use in our extensive Michigan Apiaries where WE produce honey by the carload.

ALL ITALIAN STOCK

Service guaranteed. Stock bred for honey getting and gentleness. PRICES RIGHT. Let us name you prices on any quantity.

For Quick Service Address

DAVID RUNNING
SUMTERVILLE — ALABAMA

Send Your Institute Honey Donations to These Receivers

These individuals and firms have agreed to take in honey donated to the American Honey Institute, sending a check to Russell H. Kelty, treasurer of the American Honey Institute, East Lansing, Michigan, for the value of the honey at the market price, less the freight:

Honey Receivers

George J. Brown, Fresno, Calif.
M. H. Hunt & Son, Lansing, Mich.
Allen Latham, Norwichtown, Conn.
Bee-Kist Products, Inc., 8272 Jefferson Street, Phoenix, Ariz.

A. G. Woodman Company, Grand Rapids, Mich.

Dadant & Sons, Hamilton, Ill.

James Gwin, Department of Markets, Madison, Wis.

Lothrop Nursery Company, Aberdeen, S. D.

T. W. Burleson, Waxahachie, Tex.

O. S. Bare, Extension Entomologist, College of Agriculture, Lincoln, Neb.

Sioux Honey Association, Sioux City, Iowa.

H. M. Krebs, Sacramento, Calif.
George C. Barton, Meriden, N. H.
Colorado Honey Producers' Association, Denver, Colo.

Above receiver nearest you is to be notified of the number of pounds you contemplate sending in before shipment is made.

QUEENS and PACKAGES
of our superior strain of bright Italians bred by constant selection for more than 16 years, at the lowest prices we have ever made. Write for circular and prices.

Hailey's Apiaries, Hughes Springs, Texas

Bright Golden Italians

The Queens and Bees that satisfy and please all our customers scattered through 33 States, Canada, Mexico and Central America.

If you should try them, you too will see that they do. Write for prices, they're reasonable.

Stevenson's Apiaries, Westwego, La.



**O. K.
QUEEN
CELL
CUPS**

ALL WAX — Patent Pending
Takes the place of the wood and wax queen cell cups. Are a great improvement. Have many advantages. 75c per hundred, postpaid.

O. K. B. Supply Co., W. Middletown, O.



**PORTER
BEE ESCAPE**

Saves Honey,
Time, Money

R. & E.C. PORTER, Mfgs., Lewistown, Ill.
(Mention American Bee Journal when writing)

QUEENS - BEES

This ad, if clipped and sent with your order, is worth 50 cents on any purchase of queens or package bees — Italian or Caucasian. Dependable Italian or Caucasian queens, \$1.00 each; 2-lb. package of bees, \$2.00. Complete prices and descriptive catalogue free. Let me name you special prices on quantity orders.

H. E. COFFEY, Queen Specialist
Whitsett, Texas

Latham's Queens
"She-Suome" Queens
are line-bred three-banded
Italians

This strain of Italians is un-
passed in tongue-length and also
in nectar gathering

I untested laying Queen 80 cents
6 for \$4 50 for \$31

Allen Latham
Norwichtown
Conn.

Season May 20 - Nov 1

Summer Prices

For shipments after May 10

Package bees shipped combless or with
a good comb, as desired

| | |
|----------------------------|--------|
| 3 lbs. bees with queen | \$2.00 |
| 1 lbs. bees with queen | 2.40 |
| 3-frame nucleus with queen | 2.00 |
| 4-frame nucleus with queen | 2.40 |

Special Packages — Four pounds bees
and queens with two combs of brood,
\$3.00; five pounds bees and queen with
two combs of brood, \$3.40.

Health certificate with each shipment

Select Untested Queens
35c each for One or Two

\$1.00 for Three Queens
Buy in lots of three

We guarantee our "Honey Girl" Italians
to be gentle, thrifty, and hardy.
They are easy to handle; gather large
crops of honey, and winter well.

Prompt service, safe delivery,
satisfaction guaranteed.

"St. Romain's Honey Girl"
Apiaries

Hamburg, Louisiana

Package Bees and Queens

**Shall PRICE or
QUALITY rule?**



Quality Bred Italian Bees and Queens

OUR bees cost no more, quality considered. If you appreciate quality, quantity and service, our prices will interest you. Large overweight packages, real values. Our light shipping cages and methods of crating have saved customers much money on express during the past few years. Safe shipping, no claims during the last four years. This we claim no credit, but feel that this record was a good contribution in favor of the recent one-third reduction on express rates on bees which becomes effective May 16th, and we are very thankful that this matter has been achieved.

WE are prepared to handle your orders satisfactory to you, whether large or small. If you do not have our price list, write for one immediately. It is not what you pay, but what you get for what you pay that counts. Your rush orders will be appreciated.

A Complete Stock of Lewis Beeware and Dadant's Foundation
at Catalog Prices.

YORK BEE COMPANY, Jesup, Georgia
(The Home of Quality Products)

Mention the American Bee Journal When Writing Advertisers

NO SWEEPING CLAIMS
"JUST GOOD" BEES AND QUEENS

AT LOWEST PRICES SINCE NINETEEN HUNDRED

We are not advertising men, but queen breeders. No lengthy spiel about how good, but just three reasonable statements:

First. Customers who have bought yearly since 1914, my first year of advertisement separately from my father.

Second. Recommended by state inspectors both north and south.

Third. We use them in our six hundred colonies located in the famous tupelo regions, where enormous colonies early is essential. I know they are good. Let me convince you.

Untested, 60c each; twelve for \$6.60. Two-pound package of Italian bees with queen, F. O. B. my station, \$2.00; three-pound package with queen, \$3.00.

Write for prices on lots of twelve or more packages
Usual guarantee of pure mating, satisfaction and safe arrival in U. S. and Canada

N. FOREHAND :: DE FUNIAK, FLORIDA

Mention The American Bee Journal When Writing Advertisers

BUY BEE SUPPLIES NOW

PRICES are lower than they have been in many years. Every depression is followed by a period of prosperity, when prices go up. Take advantage of these low prices before they start on the upward trend.

Write for our catalog of new, low prices for 1932.

A. H. RUSCH & SON CO.
Reedsburg, Wisconsin

ROY'S SPECIAL

Special Orchard Package or Early Builder
A Two-frame Nucleus with Four Pounds Bees and Queen, \$3.10, Any Number
Two-pound packages with queen \$2.00, any number
Three-pound packages with queen \$2.40, any number
Four-pound packages with queen \$2.70, any number

Two- and three-frame nucleus with queen same price as comb packages
Please refer to February or March issue for specification and guarantee. Address
WILLIE ROY, HESSMER, LOUISIANA

Honor Roll



Supporting Members

| | |
|---|-----------|
| *G. B. Lewis Co., Watertown, Wis. | \$1200.00 |
| *Dadant & Sons, Hamilton, Ill. | 600.00 |
| *Sioux Honey Ass'n, Sioux City, Ia. | 600.00 |
| A. I. Root Co., Medina, O. | 500.00 |
| *August Lotz Co., Boyd, Wis. | 300.00 |
| Bee Industries Association | 250.00 |
| Colorado Honey Prod. Ass'n, Denver | 237.50 |
| John G. Paton Co., 230 Park Ave., New York City | 140.00 |
| American Can Co., New York City | 100.00 |
| Continental Can Co., 100 E. 42nd St., New York City | 100.00 |
| Hazel-Atlas Glass Co., Wheeling, W. Va. | 100.00 |
| Hart Glass Mfg. Co., Dunkirk, Ind. | 50.00 |
| D. D. Stover, Tibbee Stat'n, Miss. | 50.00 |
| Standard Churn Co., Wapakoneta, O. | 40.00 |
| Owens-Illinois Glass Co., Toledo, O. | 15.00 |
| Leahy Mfg. Co., Higginsville, Mo. | 5.00 |
| A. I. Root Co. of Syracuse, Syracuse N. Y. | 15.00 |
| A. I. Root Co. of Iowa, Council Bluffs, Ia. | 25.00 |
| A. I. Root Co. of Chicago, Ill. | 5.00 |
| *Paid 20% additional assessment in order to keep Institute going. | |

Contributing Members

Canada

| | |
|--------------------------------------|--------|
| Mrs. Sheldon Trondale, Corwlin, Ont. | \$.75 |
| South Africa | |

| | |
|-------------------------------|------|
| S. Baur, Silverton, Transvaal | 1.88 |
|-------------------------------|------|

Arizona

| | |
|---|-------|
| Arizona State Beekeepers' Association, Mrs. M. G. Lovett, Secretary, 602 N. Ninth Ave., Phoenix | 10.00 |
| Wm. Doner, R. 9, Box 240, Phoenix | .50 |
| Robert Moore, R. 2, Tempe | 1.00 |
| J. Brewster, Liberty | 1.00 |
| D. L. Henderson, Willcox | 5.00 |
| W. J. W. Anderson, Benson | 5.00 |

California

| | |
|---|-------|
| Kern County Bkprs' Ass'n, Bakersfield | 7.00 |
| Butte County Bkprs' Ass'n | 7.00 |
| John W. Vasey, Miramar | 5.00 |
| Josephine Morse, Grey Ct. Inn, Corona | 5.00 |
| H. M. Krebs, Sacramento | 5.00 |
| Chas. A. Brown, Newhall | 10.00 |
| Ernest N. Judson, 9002 Normca Pl., W. Hollywood | 1.00 |
| C. Bassett, Ripon | 1.00 |
| Wm. Swegles, Modesto | .50 |
| E. J. Snyder, Denair | 15.00 |
| C. F. Williams, Los Banos | 10.00 |
| Albert Koehnen, Tracy | 25.00 |
| C. S. Kinzie, Arlington | 3.00 |
| C. E. Lush, Rt. 1, Orange | 2.25 |
| *C. Wurschmidt, Orland | 10.80 |
| H. L. Weems, Bakersfield | 2.25 |
| Warren Wolford, Ione | 2.25 |

Colorado

| | |
|--------------------------------------|---------|
| L. R. Rice, Greeley | \$10.00 |
| J. A. Green, Grand Junction | 5.00 |
| Mary T. Comstock, Westcliffe | 2.00 |
| J. A. Green & Sons, Grand Jetn, R. 2 | 5.00 |
| S. B. Fralich, DeBeque | 2.50 |

Connecticut

| | |
|--------------------------------|---------|
| Connecticut State Bkprs' Ass'n | \$25.00 |
|--------------------------------|---------|

Florida

| | |
|--|--------|
| C. W. Harper, Chipley | \$5.00 |
| Elwyn N. Moses, West Palm Beach, Drawer B-13 | 1.00 |

Illinois

| | |
|---|--------|
| Jo Daviess County Ass'n | \$5.00 |
| E. J. McCormick, Chicago, 6810 South Winchester | 1.00 |
| A. D. Boal, Downers Grove, 1218 Ross | 1.00 |
| C. F. Kannenberg, Oak Park, 1114 Augusta St. | 1.00 |
| E. W. Brown, Willow Springs | .50 |
| Chas. Newman, Chicago, R. 3, Clearing Station | .50 |
| Frank Hofman, Riverside, 39th and Stanley | 3.00 |
| Gun Mozee, Chicago, 1017 Dakin St. | 1.00 |
| Melville M. Guthrie, Chicago, 4845 N. Meade | 1.00 |
| J. J. Spangler, Downers Grove, 5209 Fairmont | 1.00 |
| W. H. Zibble, Wilmette, 1225 Washington Ave. | 1.00 |
| Wm. J. Wallances, Downers Grove | 1.00 |
| Harry R. Warren, Chicago, Box 1721 | 5.00 |
| Miss Anna Krier, Desplaines | 1.00 |
| Wm. C. Young, Chicago, 8514 S. Eliz. | 1.00 |
| Mrs. Eleanor Simmer, Chicago, 9607 Beverly Ave. | 5.00 |
| J. Frank Haan, Desplaines | 5.00 |
| C. S. Watts, Monticello | 6.00 |

AMERICAN BEE JOURNAL

List of American Honey Institute Subscribers from Feb. 1, 1931 to April 1, 1932

| | | | |
|---|---------|--|----------|
| Benj. H. Fischer, Roanoke | 4.00 | W. J. Hamilton, Almont | 5.00 |
| Alfred E. Thomas, Secor | 1.00 | James T. Lane, Hudson | 2.00 |
| L. B. Meister, Metamora | .50 | C. A. Huff, Clayton | 1.10 |
| J. P. Scheid, Eureka | .50 | Lynn M. Aldrich, Pickford | 1.00 |
| Virgil Rocke, Eureka | 1.00 | William J. Martin, Crowell | 4.00 |
| Lawrence Rocke, Roanoke | 1.00 | Fred Schroeder, Detroit, 13572 Monica | 1.00 |
| Ogle-Lee County Ass'n, Oregon | 2.00 | Floyd Markham, Ypsilanti | 7.00 |
| A. J. Polcyn, Will Co. Ass'n, Joliet | 5.00 | C. E. Glover, Kalamazoo | 3.35 |
| Tri-County Bee Ass'n, Oregon | 2.00 | C. J. Snover, Kalamazoo, 124 South Darmouth Street | 3.35 |
| Geo. L. Sauer, Polo | 3.00 | P. W. Hufford, Petoskey | 1.00 |
| S. S. Clausen, Oregon | 1.00 | *Archie Breakie, Grind Stone | 22.81 |
| Clyde Wilde, Oregon | 1.25 | Minnesota | |
| Tom Beddoes, Rockford, 2202 Sch'l St. | 1.00 | Morehouse Bros., Morris | \$10.00 |
| Rock Island County Bee Ass'n (S. F. Peterson, Sec'y), Moline | 5.00 | Iver C. Anderson, Lake Benton, R. 2 | 1.00 |
| F. A. Boedecker, Chicago, 336 West 119th St. | 1.00 | C. S. McReynolds, Clearbrook, R. 5 | 6.78 |
| C. Holm, Genoa | 2.00 | Paul S. Johnson, Callaway | 10.00 |
| Samuel Cushman, Chicago, Room 506, 6 East Lake Street | 3.00 | George Seastream, Moorhead | 27.60 |
| Brother Frederick, Techny | 1.00 | Rev. P. J. O'Connor, Renville | 5.00 |
| C. P. Jankowski, Gurnee | 1.00 | Missouri | |
| C. J. Anderson, Morris | 1.00 | Nina and Linnie Scott, Clinton, R. 3 | \$1.00 |
| I. Peterson & Son, Keweenaw | 1.00 | Dr. William C. Wilson, St. Charles, 401 N. Kingshighway | 2.00 |
| V. G. Milum, Champaign | 1.00 | Nebraska | |
| H. C. Dadant, Hamilton | 1.00 | J. H. Lutes, Stapleton | \$ 5.00 |
| S. F. Peterson, East Moline | 1.00 | O. S. Bare, Univ. of Nebraska, Lincoln | 10.00 |
| C. F. Earle, Dalton City | 1.00 | H. B. Allen, Cozad | 10.00 |
| Phillip Krebs, Marissa | 1.00 | Wm. T. Melrose, Library, R. 1 | 3.00 |
| H. L. Dunn, Onarga | 1.00 | Nebraska Beekeepers' Association, Don Whelan, Sec'y, Lincoln | 36.00 |
| E. A. Meineke, Arlington Heights | 1.00 | New Jersey | |
| Illinois State Beekeepers' Ass'n, Elmer Kommer, Treas., Woodhull | 1.00 | Richard D. Barclay, Riverton | \$10.00 |
| Peoria County Beekeepers' Ass'n, S. B. Moon, Treas., Peoria | 1.00 | New Jersey Beekeepers' Association, E. G. Carr, Sec'y, Pennington | 15.00 |
| A. G. Gill, Chicago, 224 W. Huron St. | 5.00 | New York | |
| Indiana | 5.00 | F. W. Lesser, Fayetteville | \$ 5.00 |
| Delaware Co. Bkprs' Ass'n, W. D. Carter, Sec'y, 654 Elm St., Muncie | 10.00 | John Cunningham, Syracuse | 1.00 |
| Chas. M. Smith, South Whitley, R. 1 | 1.00 | E. Watson, Brooklyn | 5.00 |
| Roy W. Spindler, New Haven, R. 1 | 1.00 | Empire State Honey Prod. Ass'n | 10.00 |
| C. M. Clark, Muncie, R. 2 | 5.00 | Chazy Orchards, Inc., Chazy | 10.00 |
| Jay Smith, Vincennes | 1.00 | Miss Louise MacMullen, Greenwich | 2.00 |
| Ross D. Scott, La Grange | 14.40 | Jas. H. Sprout, Lockport, 85 Oliver St. | 5.00 |
| Wilbur Sheron, Marion, 234 7th St. | 1.00 | J. W. Grady, Chaffee | 1.00 |
| Moody Brenneman, Berne | 5.07 | Frank Parmalee, Leroy | 1.00 |
| Frank G. Zimmerman, Churubusco | 1.00 | Wm. C. Wahl & Son, Williamsburg | 5.00 |
| A. L. Scott, Williamsburg | 1.00 | Irving Kenyon, Camillus | 1.00 |
| Iowa | 1.00 | A. W. Barrett, Trumansburg | 1.00 |
| Leonard G. Gartner, Titonka | 10.00 | Mark Baldridge, Kendalia | 1.00 |
| A. R. Soder, Hartford | 2.00 | Adams & Myers, Ransomville | 15.00 |
| John A. Johnson, Pomeroy | 3.00 | Archie Coggshall, Ithaca | 5.00 |
| B. J. Beck, Goldfield | 5.00 | A. French, Theresa | 1.00 |
| John A. Conner, Ames | 1.00 | Howard Grimes, Holcomb | 5.00 |
| E. H. Reif, Kalona Honey Co., Kalona | 5.00 | A. G. Dye, Rochester | 2.00 |
| H. G. Frymeir, Carbon Cliff | 1.00 | A. I. Root Co., Syracuse | 10.00 |
| Elmer G. Peterson, Reinbeck | 1.00 | Harold A. Merrell, Sterling Station | 1.00 |
| Harry A. Pease, Shenandoah | 4.00 | A. W. Barrett, Groton | .50 |
| J. W. Schlenker, Des Moines | 5.00 | A. H. Tuttle, Victor | .50 |
| J. E. Eckstam, Hdw., Larrabee | 3.00 | Benj. Hosley, Canton | .50 |
| Winfield Scott, Cedar Falls | 1.00 | Nelson Wheeler, Victor | .50 |
| F. W. Hatch, Scranton, R. 4 | 1.00 | J. W. Hosie, South Wales | .50 |
| A. O. Simonds, Onawa, 201 W. Marble | 2.00 | H. L. Case, Canandaigua | .50 |
| Kansas | 2.00 | F. B. Loomis, Rushville | .50 |
| Frank Erdel, Lakin | 1.00 | John K. Hicks, Romulus | .50 |
| Dr. Ralph Parker, Manhattan | 1.00 | George M. Sowerby, Cato | .50 |
| George Pratt, Topeka | 1.00 | H. B. Gable, Romulus | .50 |
| O. A. Keene, Topeka, 1700 E. Seward | 1.00 | C. J. Baldridge, Kendalia | .50 |
| E. F. Dean, Topeka, 2500 Ohio | 1.00 | B. B. Coggshall, Groton | 5.00 |
| John Eiden, Midian | 1.00 | Wheeler & Turvery, Ionia | 5.00 |
| C. F. Schad, Schad Apiaries, Vermillion | 2.00 | Emil W. Gutekunst, Colden | 10.00 |
| Louisiana | 2.00 | *F. J. Jones, Sanquoit | 6.00 |
| South Louisiana Honey Prod. Ass'n, Geo. W. Bohne, Sec'y, Luling | \$15.00 | Ontario County Beekeepers' Association, Harriet W. Scholl, Sec'y-Treasurer, 116 Fayette St., Palmyra | 3.00 |
| Maryland | | Elmer Crane, Marion; George S. Pelling, Stanley; C. J. Baldridge, Kendalia; Marvin O. Hill, Phelps, R. 3 | 7.00 |
| Ernest N. Cory, Sec'y, College Park | \$5.00 | North Carolina | |
| Massachusetts | | North Carolina Beekeepers' Ass'n | \$100.00 |
| Alden White, New Bedford, R. 1 | \$1.05 | H. A. Hailey, Fargo | \$ 7.00 |
| Adolph Matz, Brookline, 341 St. Paul | 1.00 | Charles S. Engle, Fargo | 36.25 |
| Edw. A. Twing, Monterey | 2.00 | Harry H. Harberg, Dwight | 2.00 |
| Oscar Zahn, Saginaw, R. 4 | \$3.00 | George H. Bott, Van Hook | 1.00 |
| Victor Harris, St. Louis | 24.40 | Arthur Henshel, Alice | 2.00 |
| M. N. Dillon, Fruit Ridge | 5.00 | Magill & Co., Fargo | 5.00 |
| Walter Becker, Detroit | 3.00 | North Dak. Bee Supply Co., Wahpeton | 12.00 |
| James Martin, Bellaire | 1.75 | North Dak. Beekeepers' Association, J. A. Munro, Sec'y, Fargo | 6.00 |
| Walter Rink, Port Hope | 10.00 | Ohio | |
| Don P. Barrett, Lansing | 10.00 | Ross E. Wyant, Sylvania | \$11.00 |
| David Running, Lilon | 54.00 | Clyde Wheeler, Oberlin | 3.00 |
| Owen L. Clark, St. Clair | 3.00 | Sandusky County Association | 5.00 |
| Harold Inwood, Romeo | 2.00 | W. J. Crawford, Hanover | 5.00 |
| E. C. Richardson, Adrian, 110 West Albert Street | 1.00 | Harold Garber, New Carlisle | 2.00 |
| James A. Dobson, Suttons Bay | 1.00 | R. E. Blackwell, Kipton | 1.00 |
| E. Kocsis, Detroit, R. 2 | 5.00 | (Continued on page 213) | |
| H. P. Christensen, Decatur | 1.00 | | |

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